

OPTIMAL HEALTH UNIVERSITY™

Presented by Katie Gravesen, DC

Myths About Exercise

“No pain, no gain.” “There’s only one effective combination of strength-training sets and repetitions.” “Women don’t have the physical strength necessary for weight training.”

These are just three of the numerous myths concerning exercise that Dr. Gravesen wants to set the record straight on in this week’s Optimal Health University™.



Myth: Pre-Workout Stretching Is Always Beneficial

“It is widely assumed that stretching promotes performance and reduces the incidence of injury,” explain the authors of an article published in a peer-reviewed medical journal. “However, substantial empirical evidence to confirm this belief is lacking. Conversely, an accumulating body of literature suggests that an acute bout of stretching might be detrimental to performance where maximal strength and power is critical.” (*J Sports Sci* 2005;23:208.)

How can stretching before a workout or sporting activity hinder athletic function? According to an article in *The Physician and Sportsmedicine*, “by triggering a temporary drop in muscle force, which may decrease

athletic performance in some instances (*Phys Sportsmed* 2005;3).

Chris Johnson, fitness expert and author of *Meal Patterning: Developing Healthy Nutritional Patterns for a Lifetime* (2003, Johnson Publishing), explains that static stretching, such as bending your knee behind you and grasping your ankle to stretch your quadriceps muscle, is particularly hard on the body. “If you take a rubber band and you put it in the freezer — then try to stretch it — it’s not going to expand because it’s not pliable. It’s the same with the muscles in the human body. That’s why you want to wait on static stretching until the body is fully warmed up.”

So what type of stretching *should* you do before a workout? “Dynamic stretching,” Johnson says. “It’s moving and rhythmic in nature. Something as simple as a leg swing or trunk twist.” This allows muscles to “preview” movements involved in the subsequent workout.

There are exceptions to the “no pre-workout static stretching” rule. For instance, in activities like ballet and T’ai Chi, where flexibility is more important than sudden bursts of force, pre-workout static stretching may be beneficial.

Bottom line: Unless flexibility, rather than muscle force, is key to your workout, preliminary static stretching

will hinder your athletic performance and won’t mitigate post-workout pain. So try pre-workout dynamic stretching instead.

Myth: Only High-Intensity Aerobic Exercise Burns Fat

Although more intense workouts burn more calories, they do not necessarily speed fat loss more than moderately intense exercise.

Research shows that fat oxidation (burning) increases with low to moderate exercise, but decreases with moderate to high exercise (*Int J Sports Med* 2003;24:603-8).

And, according to researchers in Denmark, “It is almost impossible to increase fat oxidation during endurance exercise at higher intensities. It seems that, for some reason, the human being is far from optimally designed for fat oxidation during exercise.” (*Scand J Med Sci Sports* 2004;14:74-99.)

Researchers in Switzerland, who were studying fat oxidation as it related to wheelchair racing, came to the same conclusions. “Absolute fat metabolism is not higher at higher intensities.” (*Spinal Cord* 2004;42:24-8.)



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Myth: No Pain, No Gain

The “no pain, no gain” mentality is most often associated with competitive athletes who need to go above and beyond normal limits to win at all costs. But if your goal is optimal health and fitness, exercise doesn’t have to be torture to produce results (*Diabetes Forecast* 1989;42:24).

And, over-accelerating the intensity of your workout can skyrocket the likelihood of being sidelined by injury.

Myth: Women Don’t Have the Physical Strength Necessary for Weight Training

Women, without a doubt, have the physical capacity for weight and resistance training. Furthermore, they should be encouraged to participate in both. Not only does weight training help the body burn more calories at rest, but it also keeps osteoporosis at bay — a condition that makes lace-work out of women’s once-strong bones (*Nurs Clin North Am* 2005;40:119-33).

In one study, 31 healthy but unfit 20- to 45-year-olds (including eight women) participated in two or three 30- to 40-minute weight-training sessions per week for six months.

After six months, the women’s muscular improvement was comparable to the men’s — plus their heart rates recovered faster from exercise (*Fam Pract News* 2005;35:20).

Myth: You Must Wait 72 Hours Between Weight-Lifting Workouts to Give Muscles a Chance to Repair Themselves

While many people believe that they should space out weight training the same muscle group by 72 hours, most professional trainers, and institutions like the Mayo Clinic, suggest giving muscles a 48-hour break between workouts.

This doesn’t mean that you can’t train daily — just not the same muscle groups (with the exception of the abdominals). To facilitate this, trainers

suggest splitting up weight-lifting workouts. For instance, do lower-body work on Monday, Wednesday, Friday and upper body on Tuesday, Thursday and Saturday.

Other experts argue that light resistance training, such as the type commonly performed in sculpting classes, is OK up to five days per week. The key is to listen to your body.

Myth: If You Stop Exercising, Muscles Will Turn Into Fat

Muscle is an entirely different tissue than fat. Therefore, it’s impossible for it to “turn into” fat. However, if you become sedentary, your muscles will atrophy (shrink) and weaken. The surrounding fat, meanwhile, will gain in size and volume: appearing to “take over.”

Myth: Three Sets of 10 Repetitions Is Most Beneficial

In weight and resistance training, the number of *repetitions* is the number of times you perform an exercise (for example a bicep curl) before taking a rest. A *set* is the grouping of repetitions. The number of sets is the number of times the sequence of repetitions is performed, with rests in between each set.

Traditional thought is that three sets of 10 repetitions produce superior results. However, research and expert trainers do not necessarily support this dictum.

With regard to repetitions, according to world-renowned trainer and nutritionist Mauro Di Pasquale, “Strength can be developed either by exposing the muscle to a lengthy ‘high-volume’ of exercise or by brief ‘high-intensity’ exercise. Both training protocols have their advantages and disadvantages.”

With today’s increasingly hectic lifestyles, Di Pasquale — co-author of *Serious Strength Training* (2002, Human Kinetics) — notes that “it’s much more practical to decrease the volume [number of reps] of training in favor of increasing the integrity of training [the amount of weight] to get the same results in less time.”

However, another study found that, “performing fewer repetitions at a higher intensity was perceived to be more difficult than performing more repetitions at a lower intensity.” (*J Strength Cond Res* 2004;18:353-8.) And the more difficult an exercise is, the more potential there is for a higher drop-out rate: reducing its overall effectiveness.

Another report specifically supported the benefit of three-set workouts. After reviewing the progress of 27 women, all of whom were between the ages of 20 and 40, researchers in Germany found that “superior strength gains occurred following three-set strength-training compared with single-set strength training in women with basic experience in resistance training.” (*J Strength Cond Res* 2001;15:284-9.)

Yet a study of 42 adult recreational weightlifters revealed that performing one set was nearly as effective as performing three sets! Specifically, three sets yielded only a 2 percent advantage in strength and endurance (*Med Sci Sports Exerc* 2000;32:235-42). Other research suggests only a slight benefit of three-set workouts vs. two-set regimens.

Bottom line: The “three sets of 10” rule is not set in stone, and it is not always the best approach. The point is to challenge yourself to the greatest extent you can without risking injury. Opting for one or two sets of repetitions using heavier weights may allow for a greater variety of exercises in the same amount of time and be more challenging than a traditional three-set protocol of repetitions.

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