

FITNESS FOCUS

BODY BUILDING

Strengthening muscles boosts blood flow, energy

By Richard S. Dargan

For the Journal

There comes a time in our lives when the desire to partake in exercise begins to outpace the ability to recover from it.

Activities we once bounced back from easily — a hike, a round of golf, a couple of hours working in the yard — now result in stiff backs, sore hamstrings and pains in muscles we forgot we had.

Muscle soreness is a normal part of the recovery process from exercise. When we work our muscles in ways or at levels to which they aren't accustomed, the body responds like it does to an injury: with inflammation and soreness. Over time, the cycle of breakdown and repair makes the muscles stronger and more toned.

But soreness can have different mechanisms in people who are sedentary.

Research on lab animals has shown that biochemical changes occur in rarely used muscles. The muscles become shortened with prolonged disuse and produce painful spasms and cramps.

In addition, when a rarely used muscle becomes sore from exercise, the body responds with the splinting reflex, shortening the connective tissue around the muscle. That causes more pain, and eventually the whole area is aching. The lower back is one of the most common sites for the problem.

Exercise data

The best way to avoid potentially debilitating muscle pain and injury is through a strength-training program. Study after study supports its importance:

A 2009 study in *The American Journal of Clinical Nutrition* found that three exercise sessions a week over 20 weeks markedly increased blood flow in the legs of older individuals, enough to reverse muscle wasting.

In an extensive review of existing research published in *Sports Medicine*, researchers determined that resistance training in older adults increases muscle mass, strength and power, enhances energy expenditure and body composition, and promotes participation in spontaneous physical activity apart from exercise training.

A 2009 study in *The Scandinavian Journal of Medicine & Science in Sports* concluded that strength training improves muscle mass and nervous system function, leading to an improved functional capacity during activities of daily living.

The benefits of strength training don't stop there. Stronger muscles stabilize osteoarthritic joints, help the bones stay strong and reduce the risk of falls.

Get a trainer

If you're beginning a strength training program, it's a good idea to work with a qualified personal trainer and learn how to perform the exercises properly.

"You want to start with light weights and do just one set per body part," says Lara Locatello, an Albuquerque-based Corrective Exercise Specialist and personal trainer certified by the National Academy of Sports Medicine. "Focus on compound movements that engage more than one muscle."

Once you get comfortable with the exercises, try to work each muscle group two to three times a week. Learn a variety of exercises, including ones you can do at home or on the road.

Your workouts may leave you stiff and sore from time to time, especially if you're trying a new routine, but the soreness should go away in a few days.

Even if you no longer look like your 21-year-old self, a strength-training program will help ensure that you can enjoy many if not all of the same sports and recreational activities you participated in when you were younger.

Exercises to restore strength

The gluteus maximus (glutes) and the rhomboid muscles of the upper back are common areas of weakness in baby boomers, according to trainer Lara Locatello.

The glutes are the largest muscle group in the body and play an important role in day-to-day living and athletic performance. But they don't get much of a workout sitting behind a desk.

"Weak glutes can create problems through the whole kinetic chain, from the ankles and knees to the back and neck," says Locatello.

Weak rhomboid muscles — the rhombus-shaped muscles in the upper back that connect the shoulder blades with the spine — are also common among people who work desk jobs, and can lead to poor posture, plantar fasciitis, upper back and neck pain and even headaches.

Locatello recommends a few simple exercises to strengthen these two areas.

GLUTE BRIDGE

Start on your back with your knees bent and feet flat on the floor. Contract your glutes and elevate your hips off the ground until your body is straight from the knees to the shoulders. Hold for a few seconds before lowering your hips to the ground. Do 15 to 20 slow, controlled reps.

"You should feel it in your glutes, not your lower back," says Locatello.

Once the movement becomes easy, you can perform it one leg at a time to increase the load on the muscles.

SCAPULAR RETRACTION

For a simple exercise that works the rhomboid muscles, stand tall and squeeze your shoulder blades together behind you. Hold for a few seconds and then relax. Do three sets of 15 to 20 reps.

"The great thing about this exercise is you can do it anywhere," says Locatello.

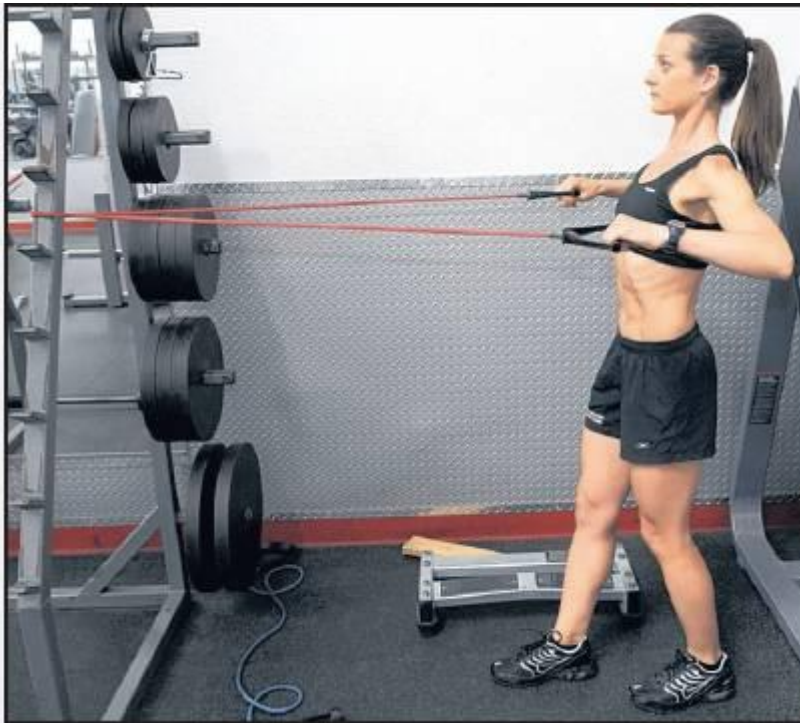
ROWING

You can further develop the rhomboid muscles by using any of the variety of rowing machines at the gym. When doing seated cable rows — perhaps the most popular variation — be sure to sit up straight and use your mid- and upper back muscles to pull the bar to your abdominals.



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A more advanced version of the glute bridge is performed on one leg at a time, as demonstrated by personal trainer Lara Locatello.



Personal trainer Lara Locatello demonstrates a rowing exercise, which can be done seated or standing to help develop the rhomboid muscles in the upper back.