



Why stretching is (still) important for weight loss and exercise

There seems to be a lot of confusion regarding the value – or lack thereof – of muscle stretching to accelerate recovery after exercise. “Stretching clears out your lactic acid,” and other similar claims abound. Is any of this true? Sort of.

First, it is important to understand the difference between stretching for recovery and stretching for remodeling.

Recovery

During exercise, muscles are called upon to work. During this work, fuel is used up, waste products are created and muscle fiber structure is disrupted by multiple micro tears. Imagine a banquet, for comparison, during which the food is eaten, garbage is accumulated (napkins, chicken bones, etc.), and the table settings disrupted. Before the next banquet, the food needs to be restocked, the garbage cleared, and the tables reset.

For muscles, this process of resetting for the next event is called recovery. The muscle is returned to full function without soreness.

This is not the process that leads to body change per se, but it is important for athletes who wish to compete at their highest level multiple times during a short period.

Athletes have tried many things to speed up recovery: cryotherapy, massage, compression, ice water immersion, stretching, hyperbaric oxygen, anti-inflammatories and electromyostimulation, just to name a few. These interventions are aimed at decreasing lactic acid, inflammatory markers and other molecules that build up following intense exercise.

Of these, only massage is consistently effective. Multiple studies have shown that stretching does not aid significantly in waste removal or serve in any capacity to accelerate muscle recovery.

Remodeling

Most of us aren't training for professional competitions, though, but are exercising to be healthy, lose weight and improve our moods.

For that, we need to focus on our body's remodeling response to exercise, which is not the same as recovery from exercise.

Plainly said, when we exercise consistently, our bodies adapt to that stressor by changing our muscle structure, metabolism and physiology. It is that change, that remodeling, that leads to all the positive benefits of exercise. To stick with our banquet example, if we realized that 500 people are going to show up at every event, but we only have 10 tables set at present, we would change our capacity to be ready for the next event. We would increase the efficiency in the kitchen and set more tables. Likewise, our body remodels itself to adapt to increasing exercise.

Many studies also have been conducted to determine how to optimize the body's remodeling response to exercise. After 35-plus years of study, six variables emerge as consistently aiding the body in its effort to reorganize in response to exercise: timing of nutritional intake (specifically protein), type of exercise, massage, sleep, low-dose creatine and – you guessed it – stretching.

Perhaps the most well-known and accepted benefits of muscle stretching exercises are improved or maintained range of motion, or both; alignment of bones and joints; and strengthening of connective tissues – all elements that optimize performance. Many studies have shown that flexibility training (dedicated attention over time to muscle stretching as part of an exercise program) directly improves muscle function, and ultrasound images have documented favorable alterations in muscle architecture following weeks of regular stretching, such as longer fibers. What's more, a recent study has clearly shown that stretching over time improves blood flow to the muscles during subsequent exercise in animals.

Prior negative commentary around muscle stretching may be misleading to the casual observer. It is true that studies have shown static stretching routines (reach, hold for 30 seconds, release, next stretch) prior to a workout or competition lead to decreases in strength during that event, and that stretching before activity does not prevent injuries, as was long thought. But these are very specific circumstances that don't apply to most people.

So do I stretch or not?

If you are an elite athlete trying to decrease injury, increase strength or accelerate muscle recovery right before your next event – then no.

If you are most people, exercising to lose weight, be well and improve mood – then yes. It will help with muscle remodeling, connective tissue strengthening, range-of-motion improvement, joint alignment and potentially blood flow during subsequent exercise – all beneficial effects in the long run.