

# Staying Fit All Life Long:

## 10 Tips for Fascial Fitness

By Tom Myers



## Introduction

You work hard to train your body to stay fit and lay the foundation for a healthy body throughout life. But working hard isn't always working smart.

Most forms of fitness overlook one of the most important tissues in the body: The fascia. Fascia is a broad term for the connective tissues in the body, the extracellular matrix of fibers, 'glue' and water surrounding all your cells, and wrapping like plastic wrap around muscle fibers, muscles, groups of muscles, organs, bones, blood vessels and nerves.

## Why Fascial Fitness?

Consciously or unconsciously, you have been working with fascia in all your exercise and training activities—it is unavoidable. Now, however, new research is casting new light on the importance of fascia and other connective tissue in functional training.

More than just a “plastic wrap around the muscles,” fascia is increasingly viewed as one, integrated system of stability and mechano-regulation; one net with no separation from top to toe, from skin to core.<sup>1</sup>

You can talk about the Atlantic, the Pacific and the Mediterranean oceans, but there is really only one interconnected ocean in the world. Fascia is the same. Every system, every organ and even every cell lives embedded within the sea of a unitary fascial net. The body—and the fascial net in particular—is a single connected unity in which the muscles and bones float.

This has wide implications for our ideas of “fitness,” and it offers a radical new way of seeing personal training—



stretching, strengthening and shape-shifting—as part of “spatial medicine.” Every cell in your body is hooked into—and responds to—the tensional environment of the fascia. Alter your mechanics, and cells can change their function.<sup>2</sup>

## **Fascial Remodeling: Keys to Creating a Healthy Fascial Network**

In a healthy body, the collagen fibrils in fascial are completely replaced every six months. Your exercise approach and habitual movement patterns largely determine this ongoing replacement of the fascial tissues.

Like bones and muscles, fascial tissues reacts to specific training by remodeling the arrangement of the collagenous fiber network that makes up a large portion of the fascial tissues. Just as your muscles remodel themselves in response to training, the fascia remodels itself in response to:

- direct signaling from the cells;
- injury;
- long-held mechanical;
- use patterns (including emotional ones);
- gravity;
- certain chemistry within your body.

The complexities of remodeling are just now being explored in the lab; the details will be revealed over the coming decade.

The intention of fascial fitness is to use specific training activities to influence this replacement and create a silk-like bodysuit in 6 to 24 months, which is not only strong but also allows for a smoothly gliding joint mobility over wide angular ranges.

## **New Knowledge, New Questions**

The emerging understanding of the fascial network leads to some important new questions about the best ways to train the human body and retain lifelong functional health. Here are some examples of what we now know about the fascial network and the questions it forces us to ask.

**What we know:** *Most injuries are connective-tissue (fascial) injuries, not muscular injuries.*

**What we need to ask:** How do we best train to prevent and repair damage and build elasticity and resilience into the system?

**What we know:** *There are 10 times more sensory nerve endings in your fascia than in your muscles.*

**What we need to ask:** How do we aim proprioceptive stimulation at the fascia as well as the muscles?

**What we know:** *Traditional anatomy texts of the muscles and fascia are inaccurate, based on a fundamental misunderstanding of our movement function.*

**What we need to ask:** How can we work with fascia as a whole, as the “organ system of stability”?



# How to Train the Neuromyofascial Web

## Principle #1: Enhancing Fascial Elasticity Is Essential to Systemic Resilience

Keeping the pliability of the fascial tissues is essential. No matter how you treat it, fascia will eventually lose its elasticity: In your eye's lens, for instance, the net stiffens in a very regular way, requiring you to use reading glasses at about age 50.

However, you can delay the process in many ways. Follow these tips to keep the fascial tissues as pliant and flexible as possible over your life span.

**Tip #1. Do Whole Body Stretching.** If fascial planes aren't stretched or moved regularly, sticky adhesions will form between the fascial surfaces. That tightness you feel upon waking in the morning is the beginning states of this kind of fascial adhesion. Over time, if these adhesions are allowed to grow stronger, they will gradually inhibit your range of motion.

To avoid this slow deterioration of functional health, engage in whole body stretching every day. Take a few minutes every morning to stretch like a cat from head to toe. For best results, take up whole body movement forms like hatha yoga or tai chi, which systematically stretch all the fascia planes from many different directions and angles.

Fascia stretches more slowly than muscles do. To make sure you stretch both muscles and fascia, hold gentle stretches for at least two to three minutes. Never push, if the stretch begins to feel too intense, ease off. When it comes to stretching the fascia, less is more.



### **Tip #2. Stay Hydrated:**

The phenomenon we call “stretch” or lengthening is a function not of the collagen fibers in fascia lengthening, but of the fibers sliding along each other on the glue of large, water-absorbing proteins called **glycoaminoglycans** GAGs. Take the water out of the GAGs, and the result is tissue that is mightily reluctant to stretch.

The less fascia is hydrated, the less elastic response it has in it. Drink at least eight 8-ounce glasses of water a day. Caffeinated or sugar-filled beverages don’t count.

**Tip #3. Favor running, walking, bouncing movements:** Connective tissue is much more elastic than previously thought. And the good news is that even when pliability is lost, fascial elasticity can be restored and returned very quickly.

Fascial elasticity is a factor only when the motion is cyclic and quickly repeated, as in running, walking or bouncing, but not as in bicycling, in which the repetitive cycle is far too slow to take advantage of fascia’s elastic properties.

When you land on the ball of your foot, you decelerate and accelerate in such a way that you not only make use of but actually build elasticity into the tendons and entire fascial system.

Measurements of calf lengthening during running have shown that much of the length required for dorsiflexion is coming from an elastic stretch of the fascia, while the muscle is contracting isometrically. This contradicts our previous understanding

that the tendon was nonelastic, and that the muscles were lengthening and shortening during these cyclic motions prior to and following footfall.

The runners who train for and employ more of this elasticity will be using less muscle power (read: less glucose) during their runs, as they are storing energy in the stretch and then getting it back during the release. Thus, they will be able to run longer with less fatigue.

**Tip # 4. Avoid Jerky Movements and Abrupt Changes of Direction:** Imagine jumping rope but landing only on your heels. The stress on all your systems would be enormous, and you would not build elasticity into the fascial system.

**Tip #5. Go Slowly.** Most injuries occur when connective tissue is stretched faster than it can respond. Encouraging greater fascial elasticity is a matter of putting a demand on the tissues to stretch more, but doing this slowly (as compared with muscle training) is an essential attribute of fascial training. It may take 6–24 months to build fascial elasticity, so proceed with patience, and don't push and overexert.

## **Principle #2: The Fascial System Needs Variation, Not Repetition**

The fascial system is better trained by a wide variety of vectors—in angle, tempo and load. Isolating muscles along one track (e.g., with an exercise machine) may be useful for those muscles but is less than useful for all the surrounding tissues. Loading the tissue one way all the time means it will be weaker when life—which is rarely repetitive—throws that part of the body a curve ball.

**Tip #6. Engage in Varied, Whole-Body Movements.** The best way to train the fascial system is to engage in long myofascial chains and whole-body movements. Favor complex movements requiring constant adaptation, such as any form of dancing, balancing, tai chi, yoga, and other types of activities that constantly challenge the body in new ways. If walking, favor uneven surfaces over smooth pavements to train whole body integration, coordination and adroitness.

**Tip #7. Avoid Repetitive Movement.** Machines (or minds) that require you to work in the same line again and again do not build fascial resilience very well. Avoid repetitive movements and avoid always training in the same tempo.

Similarly, vary challenge levels. Don't always train at near maximum capacity: Variable loads build different aspects of the fascia. Sticking with near-limit loads will strengthen some ligaments but weaken others. Varying the load is the better way.

### **Principle #3: Proprioception and Kinesthesia Are Primarily Fascial, not Muscular**

There are 10 times as many sensory receptors in your fascial tissues as there are in your muscles. So when you say you are feeling your muscles move, this is a bit of a misnomer. You are "listening" to your fascial tissues much more than to your muscles.

**Tip #8: Follow the Pleasure Principle.** The best training effect seems to follow the pleasure principle: Feel for the sense of elegance, an ideal resonance with minimum effort and maximum ease. This is one of the most important ways to enhance your proprioceptive abilities and attune yourself to the effects of your fitness activities in the fascial network.

Taking attention—your own and your client's—away from the muscles and directing it into the surrounding fascial tissues can help prevent injury and make the perception of kinesthesia more accurate and fully informed. Rubbing and moving the skin and surface tissues is another great way to enhance fascial proprioception.

**Tip #9: Avoid Isolated Muscle Orientation.** Exercising a single muscle or muscle group is nearly impossible; every exercise is stimulating multiple nerves, involving multiple muscles and employing fascial tissues all around the site of effort, as well as "upstream" and "downstream" from it. Similarly, given that the ligaments are often



tensed by the muscles, the emphasis on joint receptors—while important—needs to be replaced with a more general attention to the whole area, from the skin on down.

**Tip #10: Take Some R&R.** The fascia gets temporarily weaker and then comes back stronger after a heavy workout. Always alternate work-outs with periodic rest to allow for maximum integration and strengthening of the fascial network.

Similarly, if you're all tensed up after a long day at the office desk, treat yourself to a 15-20 minute warm Epsom salt bath to relax not just your muscles, but entice tightened fascial tissues to loosen up.

## Other Suggested Reading

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IDEA Fitness Journal, Volume 8, Number 4

## Endnotes

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