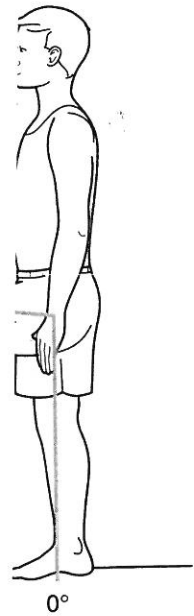




# ***Stretch to Win***

***Flexibility for  
improved speed,  
power, and agility***

**Ann Frederick  
Chris Frederick**



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them so that he eliminates not only the TPs, but also the tightness and restricted mobility that comes with them. Guidelines about how to stretch tight regions and the areas that have trigger points can be found in the stretch matrix we describe later in this chapter and in chapter 6.

- Kevin will retest his sport movements—dropping back and shuffling right for football and testing his running—to determine if his program of sMFR and stretching has eliminated all or most of his barriers to optimal performance. If problems persist, he'll see the appropriate professional for a diagnostic work-up.

These two examples show you how to develop the framework of a flexibility training program from the information you collected your PFA, based on your own physical findings and subjective statements. Take some time now to interpret your own PFA findings to set your own flexibility goals

To go from this framework phase to the concrete phase of a stretching program you need to know more about specific training parameters (such as intensity, frequency, and duration) and whether the flexibility goals are for preactivity or postactivity. We discuss how to consider those factors in relation to your own goals and needs later in this chapter.

## Warming Up With Self-Myofascial Release

In chapter 4 (pages 67 to 75) you learned how to roll on a ball (or foam roll) to locate and identify trigger points and other local sources of tightness in your muscle and fascia. In this section we show you how to eliminate or greatly reduce the presence of these problem areas in your body.

It is always a good idea to warm up the body before doing any type of self-myofascial release or stretching. This holds true even when the stretching itself is considered part of a warm-up. Performing two to five minutes of aerobic activity such as jogging or stationary cycling is enough to get the blood circulating and to warm the tissues.

The process of releasing soft tissue restrictions in the body begins deep in the matrix of the connective tissue. So, after performing aerobic exercise to raise the body's core temperature, for the very best results we recommend also warming up for stretching by using a technique called self-myofascial release (sMFR).

An athlete performs sMFR by lying on a 5- to 7-inch (12- to 18-cm) diameter ball on the floor (or standing with one foot on a tennis ball or on a Footsie Roller if working the feet). The position of the ball depends on which part of the body you are trying to release. Cheryl Soleway, a physiotherapist from Canada and a marvelous teacher, introduced us to this powerful approach. The pressure of the ball stretches as it stimulates, creating space between connective tissue, muscle attachments, blood vessels, and fascia. All the athletes we work with who are

truly intent on achieving the most flexibility possible practice this part of their training on a daily basis.

Rolling on the ball can help you reduce or eliminate conditions that can impair your strength and flexibility such as trigger points, scar tissue, and tight spots in the muscles. Active range of motion, strength, and stretching all improve after eliminating these trouble spots in the muscle, as you will see when you retest the restrictions that you identified in your PFA.

When you perform sMFR before stretching, you dramatically increase your flexibility and range of motion. Tension and trigger points in the fascia can hinder the success of a stretching program and limit freedom of movement, which can adversely affect performance. With self-myofascial release the tissue warms up from the pressure and from your movement over the ball, becoming more pliable and able to change its shape. As it lengthens tissues, sMFR also relaxes the tension in the coils of the wavy collagen fibers within them, similar to the effect of a deep massage. This all contributes to greater gains in flexibility and mobility. Of course, there is no substitute for good bodywork from an experienced therapist when you need it. However, sMFR does allow you to work on your own tissues, and it puts you in complete control of the work.

### **Self-Myofascial Release—Anytime!**

There are many ways that sMFR can be incorporated into your program, not just as part of your warm-up. It makes any stretching that follows it more productive and relaxing. You can benefit by taking a minute or so to use it on any specific problem area before a practice or training session. It can even be used to quickly release a couple of spots that might feel tight in the middle of working out. You can perform it as a stand-alone session during the day for any amount of time, from a few minutes to over an hour. The end of the day is an excellent time for sMFR, because it allows you to restore length and balance to your muscles and fascia. It also prepares your body for some deeper stretching before you go to bed. It is a great way to calm down your nervous system and puts you in a perfect state to get a restful night's sleep. When you wake up the next morning, you'll feel more balanced, loose, and ready for action.

The application of sMFR is an extremely helpful adjunct to stretching. Although it is not a mandatory practice, we strongly recommend making it a regular part of your flexibility training program because of its cumulative long-term benefits. We suggest trying to get in at least a couple of areas every day and a full-body sMFR once a week. If you are pressed for time, check out the quick three key spots routine (pages 100-101), which just about anyone can fit into a busy schedule once a week.

### **Choose Your Tools**

There are a number of tools you can use for sMFR, including FitBALL Body Therapy Balls, various foam rollers, Footsie Rollers, The Stick, Thera Canes, tennis

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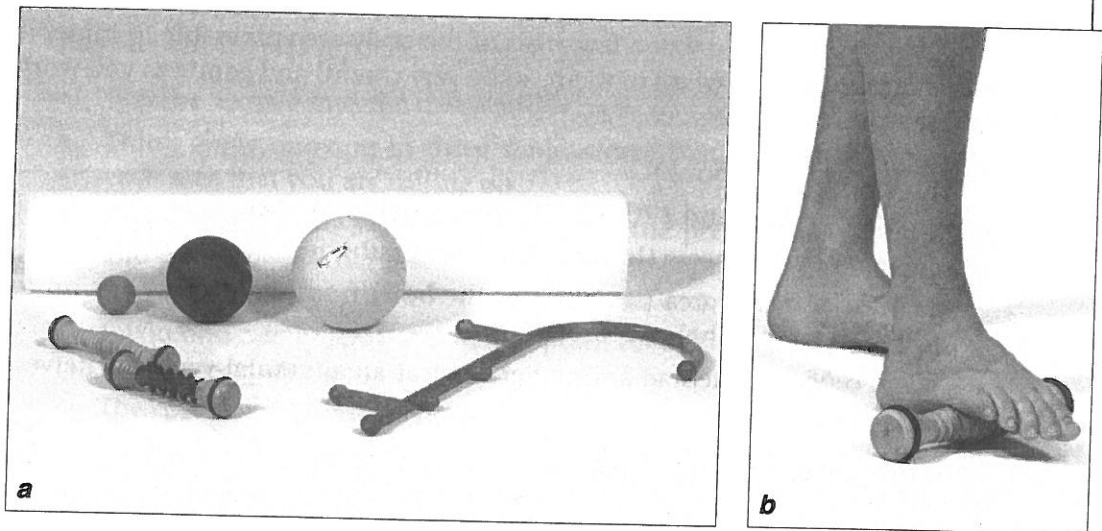
balls, and golf balls (figure 5.2, *a* and *b*). You might want to try all of these tools to find out which ones work best for you.

Foam rolls are popularly used for working on tight areas and trigger points but we find that 5-, 6-, and 7-inch (13-, 15-, and 18-cm) FitBalls works well for most people, both because of the three-dimensional qualities of the ball and because users can control the firmness by filling them up with more air or letting some out. How much change you will experience in the fascia using these balls depends on the amount of pressure applied, how long it is applied, and how quickly or gradually it is applied.

The largest (7-in or 13-cm diameter) ball works best for beginners and for people who are 6 feet, 6 inches tall or taller (198 cm) or who weigh 200 pounds (90.8 kg) or more. People whose muscles are extremely tight or tender to the touch or who have many trigger points in their bodies would do well to start with this size. This ball works best for a gentle and general response and release.

The 6-inch (15 cm) ball is recommended for intermediate and experienced participants in sMFR who are comfortable with the work and not currently suffering from any major pain or soreness in their tissue. These balls works best for broad areas of the body, such as the quads and lats, and for people who are heavier in body type.

The smallest (5-in or 13-cm) ball is more intense and is recommended for more advanced and isolated work. It can be used in smaller regions—deep in the hip flexors or rotator cuff, for example. Because of their dense muscular structures



**Figure 5.2** Tools for self-myofascial release (*a*) include the foam roll, a self-myofascial release ball, a racquet ball, a tennis ball, Footsie Rollers, and a Theracane. The Footsie Roller (*b*) is an effective tool for breaking up adhesions and releasing trigger points in the sole of the foot.

and enthusiastic attitudes, many of the athletes we work with jump right into using the 5-inch balls, but actually it is better for any athlete to slowly work his or her way toward using them after working on the larger balls. If moving too quickly or exerting pressure too deeply during sMFR causes pain or unnecessary discomfort, there may be a guarding and tightening response in the body. This inhibits the releasing process and is counterproductive. The best approach is to go slowly and be patient as you relax and breathe, working with the ball rather than against it. In the beginning, take many breaks off the ball until you get used to doing it regularly. You can move to a smaller ball as your tissue sensitivity to the pressure decreases. As with your stretching, this is a journey of discovery and not a race to the end!

Remember that the sensation you feel from performing sMFR should never be one of pain, but more a feeling of pressure, then a slight burning or stinging and eventual relief as your tissues relax. This feeling of local fascial stretching and tissue elongating over the ball is very different from the sensations you get from stretching without using the ball. If you detect any significant discomfort that does not subside within a few breaths, it's best to move off the sensitive area and instead work around it, slowly working toward it and retesting pressure on it. Many times this indirect approach lessens the sensitivity enough to allow the area to be worked on. If you experience pain that is intense or that does not subside after the third attempt, immediately move off that spot. You may have gone over a bruised area, a nerve caught in the connective tissue, an area of inflammation, or a bone. Consult a health care practitioner if you have any concerns.

If you ever feel dizzy, light headed, or nauseated, please stop your sMFR immediately. Also, note that a few areas of the body are vulnerable to injury if excessive pressure is applied to them, so be very careful and gentle as you work near or around these regions:

- The coccyx (tailbone)
- The lower 11th and 12th ribs (floating ribs) in the back area
- The xyphoid process (lower tip of the breastbone)
- The abdominal area (the front of the body from the pubic bone up to just below the ribs)
- The cervical vertebrae and upper cervical area (cranial-vertebral nerves, arteries)

Do not engage in sMFR if you have any stitches, fractures, or open wounds. You should also not engage in it if you are receiving anticoagulant therapy or might be suffering from any of the following disorders: malignancy; osteoporosis; osteomyelitis; acute rheumatoid arthritis; inflammatory conditions; systemic or localized infection; sensitive diabetes; hypersensitive skin conditions; or circulatory conditions (e.g., edema, hematoma, or blood pressure problems).

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## Self-Myofascial Release Routines

You'll want to return to pages 69 and 74 to review the myofascial lines that the routines follow. In *Anatomy Trains*, Tom Myers writes "Muscles operate across functionally integrated body-wide continuities within the fascial webbing. These sheets and lines follow the warp and weft of the body's connective tissue fabric, forming traceable 'meridians' of myofascia. Strain, tension, fixation, compensations, and most movement are all distributed along these lines."

When you look at the body from this integrated perspective, you can see more clearly how crucial it is to achieve and maintain as much freedom of movement as possible. It is especially important because, as Myers points out, the interconnectedness of the myofascial lines, or meridians, makes a lack of flexibility anywhere in the body a problem for the entire body. Athletes need bodywide freedom of movement in order to perform at their highest potential.

### Sample Self-Myofascial Release Schedule

Refer to your PFA to see which areas of your body are tight and tender, then plan your weekly sMFR program accordingly. A typical program would include the following:

<b>Feet</b>	Two or three minutes	Daily
<b>Three key spots</b>	Five to ten minutes	3 x per week
<b>Full program</b>	Up to one hour	1 x per week

As you perform self-myofascial release, keep the following tips in mind:

- Breathe. Exhale into the tissue and relax as you move through the area.
- Think about moving in three dimensions, that is, thoroughly explore each area that you are rolling on.
- If you come upon a tender spot, reduce the pressure you are applying and try to stay in that place for several deep breaths until the tenderness lessens. If the tenderness does not decrease, keep moving.
- If you find a tight spot, stay at that point for a few seconds until you feel the tissue releasing.
- The speed at which you choose to move helps determine the intensity of the work. The general rule is that the more slowly you move, the more intense the sensation will be, but, often, the greater the tissue release will be as well.

## FEET

As the literal foundation of the body, the feet are involved in most athletic movement. They have one of the highest concentrations of nerve endings in the entire body, and working on them can be a quick and powerful way to release tension throughout the body. For foot rolling you can use a tennis, racquet or golf ball, but we prefer something called a Footsie Roller, which is a 6.5-inch (17-cm) round wooden object that we have been using for over 30 years.

1. Stand facing a wall or stable object that you can use for support. Place the Footsie Roller or ball in the center of your heel and begin to put some of your weight on it.
2. Slowly roll it toward the toes, pulling the roller or ball toward you as you roll. Apply as much pressure as you can tolerate. Stop when you feel any tightness or tenderness and wait until it releases or lessens before continuing.
3. Once you get to the tips of the toes, reverse directions and roll slowly back down to the heel.
4. Place the roller on the outer edge of the foot and repeat steps 1 through 3, moving from the heel to the toes and back down again.
5. Place the roller on the inside edge of the foot and repeat steps 1 through 3, moving from the heel to the toes and back down again.
6. If you feel that the tissues of your foot are sufficiently released, perform the full sequence on the other foot.

## THREE KEY SPOTS

If you have only 5 to 10 minutes for sMFR, you can choose to target three key spots that are common areas of tension and tightness. Begin with the feet (as described previously), move to the hip and low back area, and then work on the spine. The hip (including the six deep rotators) and low back area is one of the tightest regions in most athletes and is crucial to all athletic movement. Releasing the spine is fundamental to getting the back, shoulders, and neck to open up.

1. Perform the foot self-myofascial release (described in previous exercise).
2. When you are finished with your feet, sit on the floor and place the ball directly in the center between your two sit bones on your sacrum above and off your tailbone. Place your feet flat on the floor and your hands on either side of your body.
3. Slowly move over the ball in this area in small circles, then over to one side of the glutes, staying close to the sit bone, which many muscles attach to. Move back and forth, up and down, and in all directions, targeting the glute tissues and fibers. The deeper you sink in this area the more of the six deep rotators you will reach.
4. To target the lateral side of the hip and back, slowly turn onto the hip with the ball beneath your side, placing your forearm on the floor to support yourself. Roll around in this area, again moving in all directions, on the lateral fibers of the hip.

5. Move the ball up toward the rib cage (being careful not to put pressure on the floating ribs) and make contact with the tissue of the quadratus lumborum, which is in your waist area.
6. Continue turning over until you are facing the floor, with the ball under your hip flexor area, and roll around in all directions.
7. Return to the original sitting position with the ball underneath you, and repeat steps 3 through 6 on the other hip.
8. When you've finished the hip series on both sides, it's time to move on to your low back. Lie on your back with the ball beneath your sacrum and your legs slightly bent, feet on the floor.
9. Roll back and forth with the ball on sacrum, moving out to the sacroiliac joint on both sides. Be careful not to put pressure on your tailbone (coccyx).
10. Move in all directions on the low back. To increase pressure, lift both feet off the floor if you can and continue moving in small circles, supporting and stabilizing yourself on both forearms.
11. With the ball still under the sacrum, put the feet on the floor hip-width apart, keeping your legs slightly bent. Interlace your fingers and place hands behind your head.
12. Use the legs to assist your movement by walking and pushing and pulling off the feet as you roll over the ball.
13. Slowly roll up over the ball along the center of your spine. Extend or arch the trunk by relaxing it as you roll over the ball from the bottom of the spine to the top of the neck.
14. Release the hands and spread the arms out to each side on the floor as you increase the trunk extension and feel the chest opening up to prepare for the next move.
15. Interlace the fingers and place them behind the head again and roll the ball down the center of the spine, using trunk flexion to increase the feeling.
16. Move the ball just off to one side of your spine and roll it back up to the neck. Roll it back down again on the same side of the spine.
17. Repeat on the other side, upward and downward.