



{feel the



# stretch}

MAKE STRETCHING A PART OF  
YOUR SELF-CARE PROGRAM  
by Joe Muscolino



receiving massage therapy can be extremely relaxing and therapeutically beneficial for the client. For the massage therapist, however, giving massage can be a strenuous physical activity.

Over time, an accumulation of physical stress can begin to take a toll on our muscles and joints. Overuse of muscles can cause them to become chronically tight and sore; and compression and torque forces on the joints can lead to joint dysfunction and pain. In turn, joint pain can lead to further tightening of the muscles via protective muscle splinting and the pain-spasm-pain cycle. Tight muscles can then further limit joint motion, leading to fascial adhesions. This cycle, once begun, can be difficult to stop.

The key is to be proactive and practice self-care so that we prevent problems from occurring in the first place. One aspect of self-care for the therapist is to employ good body mechanics. However, even the best body mechanics do not eliminate physical stress to the therapist's body; they simply minimize it. It is

also wise to space out the scheduling of clients to give our body time to rest and heal. And certainly, if we recommend to our clients that they receive massage for their well-being, we should do the same and receive massage ourselves. However, as important as these things are, perhaps no aspect of self-care is more important than regular stretching.

Stretching is very simple. The essence of stretching is that it lengthens soft tissues. Taut soft tissues limit motion, whether they are tight muscles or any soft tissue that has accumulated fascial adhesions. Stretching can help to reverse this process. Even better, stretching on a regular basis can prevent soft tissues from becoming taut in the first place.

#### WHEN AND HOW TO STRETCH

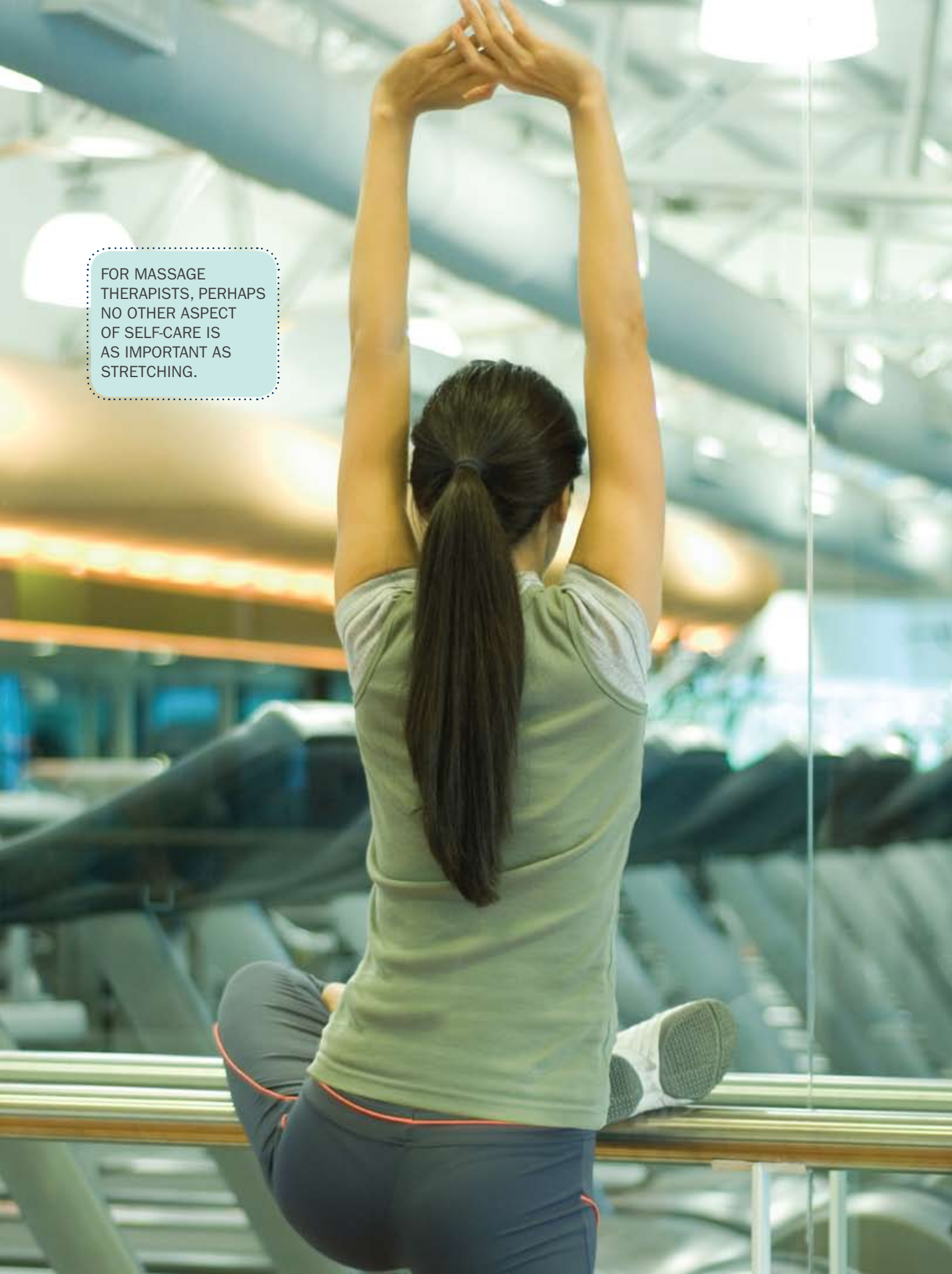
There are a number of choices when it comes to stretching. Perhaps the

first question is: When should we stretch? Interestingly, the answer to this question largely rests on what type of stretching is done. Stretching can be broadly divided into two main types: classic, static stretching and dynamic stretching.

Static stretching, as its name implies, involves a stretching position that is statically held; that is, it is held for a prolonged period of time, usually between 10 and 20 seconds (although some advocates recommend holding the stretch for several minutes). Three repetitions are usually performed. Dynamic stretching, on the other hand, is a more movement-oriented style of stretching in which the position of the stretch is held for only a very short period of time, usually between one and three seconds. A greater number of repetitions, usually between five and 10, are performed. Also known as *mobilization stretching*, dynamic stretching is actually as much a warm-up activity for the body as a stretch.

Returning to our question of when to stretch, conventional wisdom now states that classic static stretching should be done *only after* the tissues of the body are first warmed up by physical movement. For the massage therapist, this means that we should statically stretch after giving massage, or after engaging in some other physical activity, such as exercise. Alternately, we could statically stretch after warming the body via the use of heat, perhaps a shower, bath or even a heating pad.

If static stretching is best performed *after* giving massage, then dynamic stretching is best done as a combination warm-up mobilization and stretch *before* giving massage. The movement aspect of dynamic stretching better increases local blood circulation and moves synovial fluid, aiding in better nutrition to the joint surfaces. And, of course,

A woman with long dark hair in a ponytail, wearing a light green t-shirt and dark blue leggings, is sitting on a wooden barre in a gym. She is stretching her arms upwards, with her hands clasped together above her head. The background shows various gym equipment like treadmills and ellipticals, and a large window with a view of the outdoors. The lighting is bright and modern.

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THERAPISTS, PERHAPS  
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the soft tissues on the other side of the joint are lengthened and therefore stretched.

### HOW HARD SHOULD WE STRETCH?

Stretching is like the proverbial Goldilocks and the Three Bears story. Too gentle and nothing is accomplished; too strong and the muscle will respond with a muscle spindle stretch reflex that causes a spasm. Muscle spindle stretch reflexes are triggered by a stretch that is either too strong or too fast. Therefore, the force of a stretch needs to be just right, and it needs to be done slowly.

When stretching a muscle, bring the muscle to the point of tension where it just starts to resist the stretch; then the muscle should be slowly stretched, just slightly longer than the point where tissue tension was reached.

### HOW MUCH TIME SHOULD WE SPEND STRETCHING?

How much time we spend stretching is largely determined by the logistics of our schedule and how much of our body we want to stretch. Engaging in a stretching program that stretches the entire body is optimal. If time is tight, however, there are certain key regions of the massage therapist's body that tend to be physically stressed more than the others. These regions are the shoulder and forearm of the **upper extremity**, posterior trunk and neck muscles of the **spine**, and the hip flexors, hamstrings and plantarflexors of the **lower extremity**.

The figures on pages 33–34 and 36 demonstrate a stretch for each of these key regions. They should be performed bilaterally. If we assume that a stretch of a muscle/muscle group typically takes between 30 and 60 seconds, then the following routine should require approximately 10–15 minutes. Of course, if one of these specific regions is tighter than the rest, then it may be desirable to stretch that region more often than the other regions. If a stretch is performed correctly—not done too forcefully, too fast, and does not cause pain—then it can be repeated during the day as often as desired (To get more from stretching, see “Adding Neural Inhibition to the Stretch” on page 38).

**UPPER EXTREMITY:** Most often when massaging, we contact the client with our hand or occasionally our forearm or elbow. This means that the pressure that we are exerting into the client passes through our upper extremity. Further, the posture of mas-

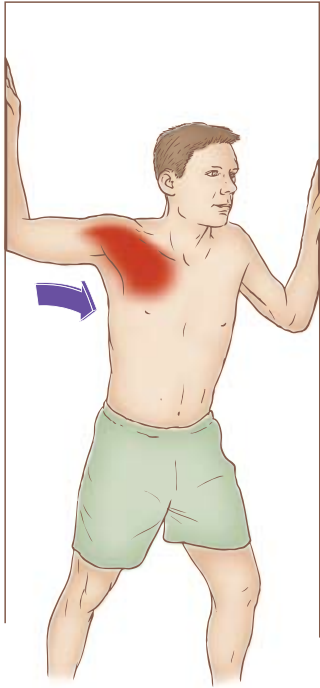
saging the client often results in a rounded shoulder posture (scapular protraction with glenohumeral joint medial rotation). For this reason, it is especially important to address the musculature of this region. Figures 1–5 demonstrate stretches for the upper extremity.

**SPINE:** Because we are so often posturally inclined forward when massaging the client, the posterior extensor musculature of our trunk and neck is especially used/overused to isometrically contract to maintain this imbalanced posture. Therefore it is important to stretch these muscle groups. If we lean to the side when working, the lateral trunk musculature should also be stretched. Figures 6–8 demonstrate stretches for the trunk and neck.

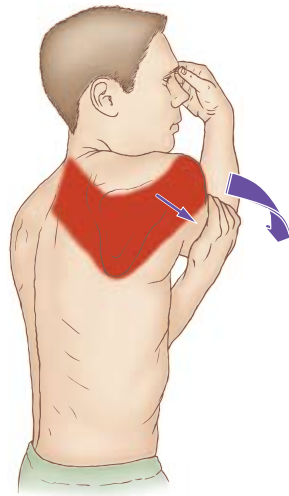
**LOWER EXTREMITY:** Much of the force that we create during a massage can and should be generated from the lower extremities. It is especially important to stretch the gluteal, hip flexor, hamstring, and gastrocnemius/soleus groups. Figures 9–12 demonstrate stretches for these groups of the lower extremity. ■

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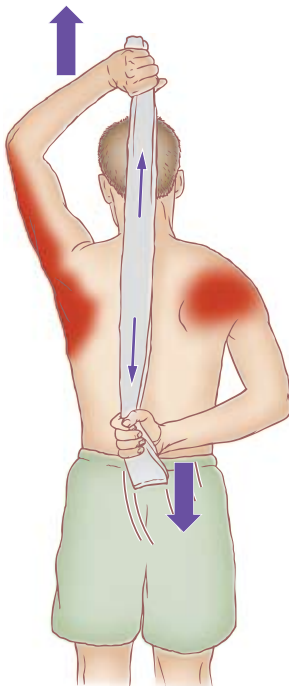




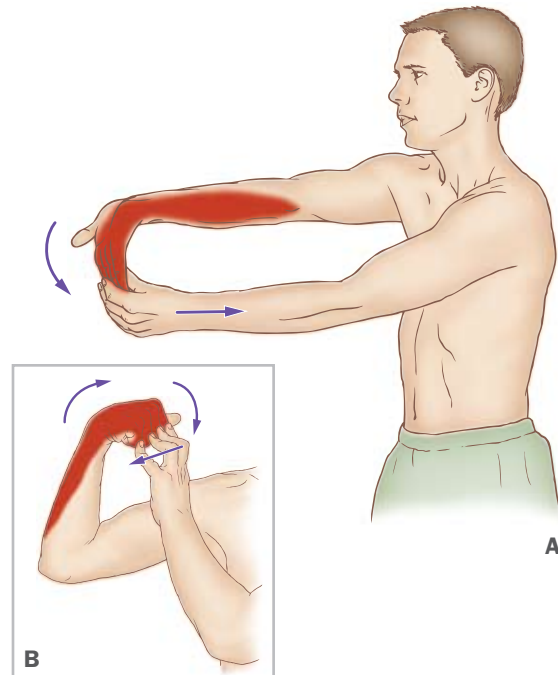
**FIGURE 1** demonstrates a stretch of the pectoral and anterior deltoid regions. Place the forearm against a door frame and lean into the doorway. Note: The arm is shown abducted to ninety degrees (i.e., horizontal); it could be abducted more or less to better stretch lower or upper fibers of the region respectively.



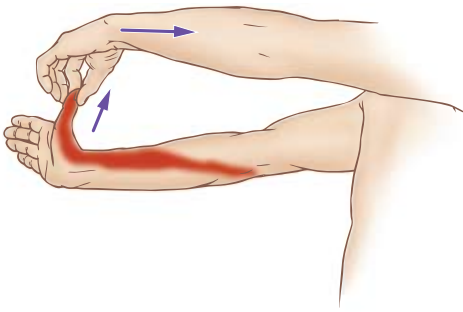
**FIGURE 2** demonstrates a stretch of the posterior shoulder and shoulder girdle region. The arm is moved or brought forward and across the chest. Changing the height of the arm can alter which fibers are optimally stretched.



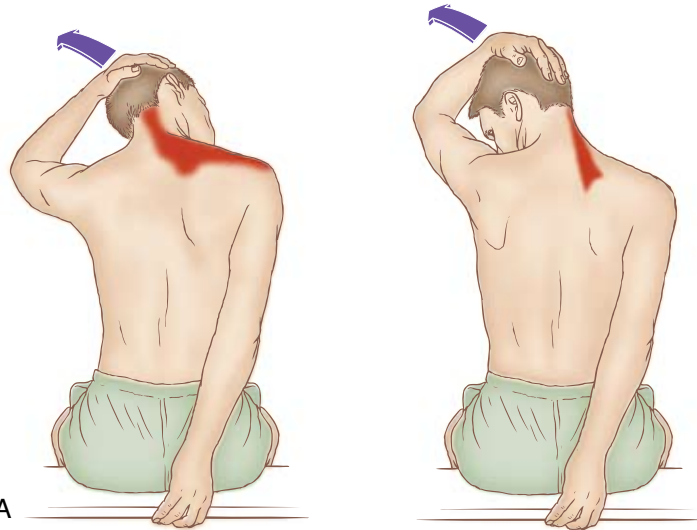
**FIGURE 3** demonstrates a stretch of the muscles of the glenohumeral joint. A towel is used to facilitate this stretch. Pulling upward with the left hand stretches the right shoulder region; pulling downward with the right hand stretches the left shoulder region.



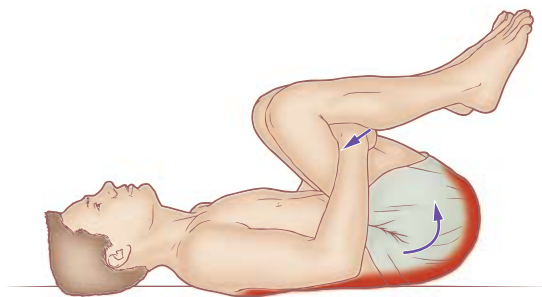
**FIGURE 4** demonstrates stretches of the muscles of the wrist and fingers. A, flexors; B, extensors. Note: Extreme caution should be used when performing wrist joint stretches because of the increased compression force that is placed into the carpal tunnel. If these stretches cause any pain or discomfort in the wrist, they should be discontinued. The muscles of the forearm and hand that are involved in these stretches are easily accessible and can be self-massaged instead.



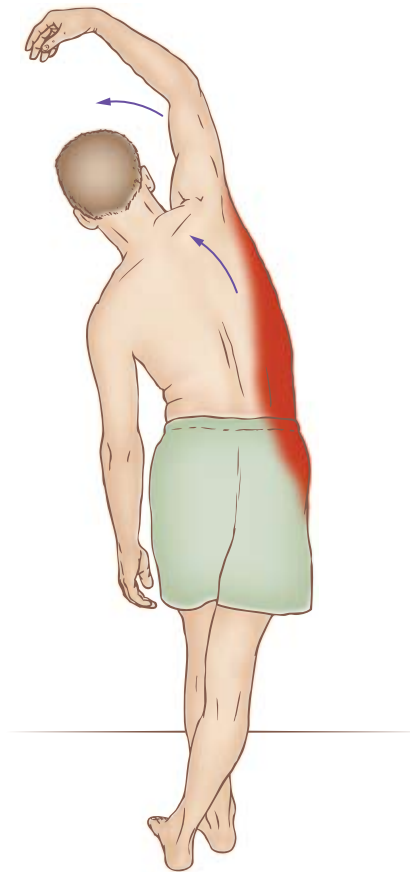
**FIGURE 5** demonstrates a stretch of the flexors and adductors of the thumb.



**FIGURE 6** demonstrates two stretches for the extensor muscles of the posterior neck. Both stretches involve flexing and laterally flexing the neck and head. In A, ipsilateral rotation is added; in B, contralateral rotation is added.




**FIGURE 7** demonstrates a stretch for the extensor muscles of the posterior trunk. Both knees are drawn into the chest. To increase the stretch for the extensor muscles on one side, deviating the thighs toward the opposite side can be added to the stretch.



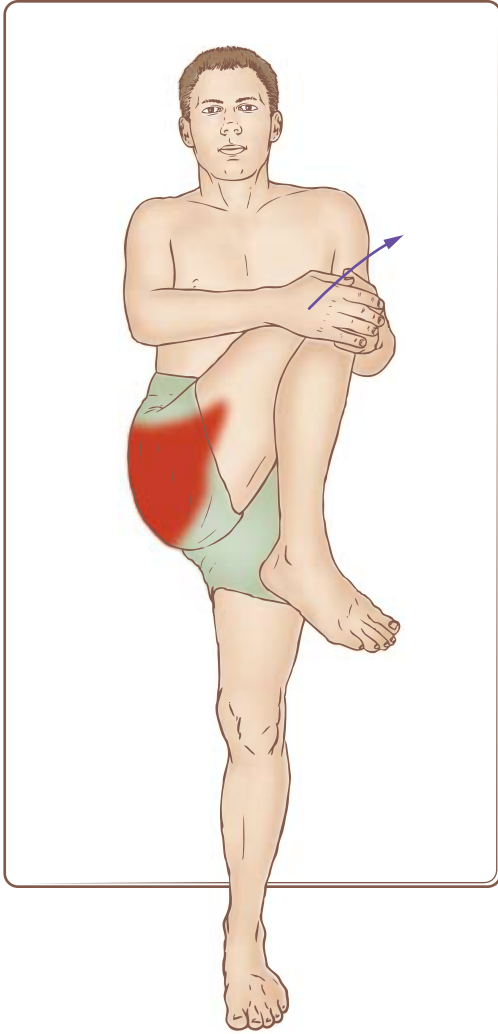
**FIGURE 8** demonstrates a stretch for the lateral trunk.

**AMTA  
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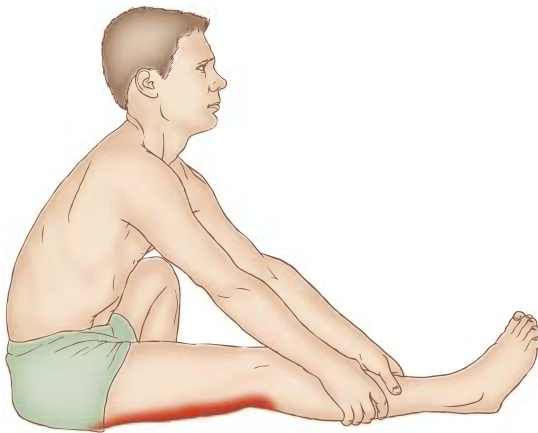
Want more information about how stretching can improve your well-being? Have a look at the Body Mechanics column in the Fall 2006 issue of *mtj*, where you'll learn how to stretch your way to better health → [amtamassage.org/mtj](http://amtamassage.org/mtj).



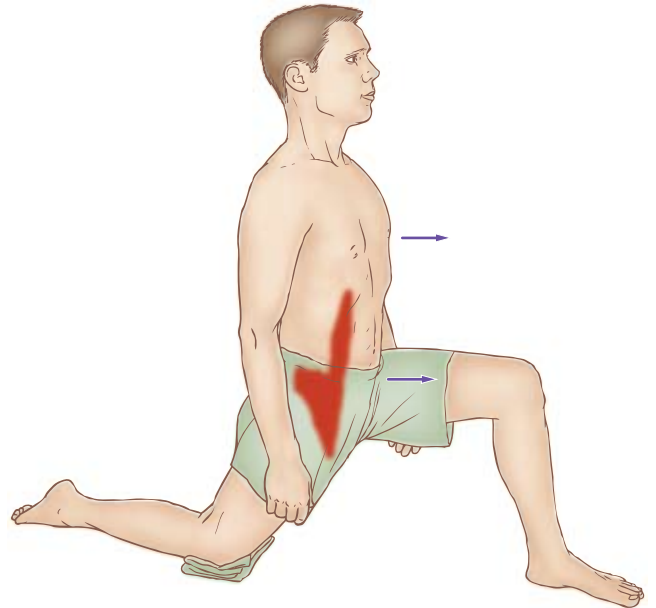
HOW MUCH TIME WE SPEND STRETCHING IS LARGELY DETERMINED BY THE LOGISTICS OF OUR SCHEDULE AND HOW MUCH OF OUR BODY WE WANT TO STRETCH. ENGAGING IN A STRETCHING PROGRAM THAT STRETCHES THE ENTIRE BODY IS OPTIMAL.



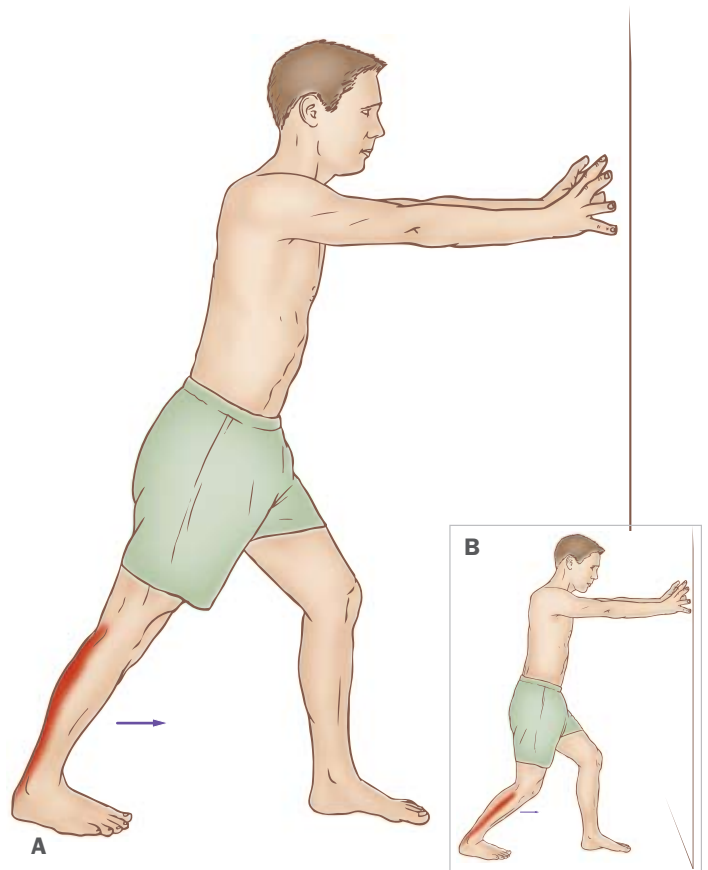
**FIGURE 9** demonstrates a stretch for the gluteal region. The thigh is drawn up and across the body. Varying the exact angle of the thigh can optimally stretch different fibers of the gluteal region.



**FIGURE 11** demonstrates a stretch for the hamstring group. With the knee joint fully extended, rock forward with the pelvis (the spine does not need to bend).



**FIGURE 10** demonstrates a stretch for the hip flexor group. Note: When performing this stretch, it is important to keep the trunk vertical.



**FIGURE 12** demonstrates a stretch for the plantarflexors of the posterior leg. A, for the gastrocnemius, the knee joint must be extended. B, for the soleus, the knee joint should be flexed. For both muscles, the heel must remain flat on the floor.



When stretching a muscle, bring the muscle to the point of tension where it just starts to resist the stretch. Then the muscle should be slowly stretched, just slightly longer than the point where tissue tension was reached.



# adding neural inhibition to the stretch

A stretch can be enhanced by adding a neural inhibition component, whether performed statically or dynamically. Neural inhibition involves the nervous system inhibiting; in other words, relaxing a muscle so that it can be stretched more effectively. Two nervous system reflexes can be utilized for this: reciprocal inhibition reflex and the Golgi tendon organ reflex.

**RECIPROCAL INHIBITION** is a reflex that inhibits/relaxes the antagonist muscles when an agonist (mover) muscle is contracted. The key to using this reflex is to create a scenario in which our target muscle (the muscle to be stretched) is the antagonist of a joint motion. It's quite simple to do. We contract our musculature to actively move our body into the position of stretch of the target muscle. For example, if our target muscles are the hip flexors, we simply move the thigh into extension at the hip joint.

In effect, any dynamic stretch adds the component of reciprocal inhibition if we actively move the body part into the position of the stretch instead of passively moving it there. For example, when stretching the posterior shoulder region as seen in Figure 2, instead of using the left hand to bring the right upper extremity into the position of stretch, we contract the anterior shoulder musculature of the right upper extremity to actively move it into the position of stretch. In addition to the mechanical component of stretching the posterior soft tissues, the posterior muscles will be reciprocally inhibited so they can then be stretched more effectively.

Once the position of stretch is reached, we then further stretch the target musculature; this is done passively by using the left hand to stretch the right upper extremity. Stretches that utilize reciprocal inhibition are called ag-

*onist contract* (AC) stretches. Aaron Mattes' technique, active isolated stretching, is a form of AC stretching. AC stretches are usually performed dynamically; therefore the position of stretch is only held for a couple of seconds and eight to 10 repetitions are performed.

**THE GOLGI TENDON ORGAN REFLEX** inhibits a muscle from contracting if that muscle is first contracted with moderate or greater force. To utilize this reflex when stretching, we need to first actively contract our target musculature. This is usually done isometrically against the resistance of our own body. If the right-sided posterior neck musculature in Figure 6 are our target muscles, instead of simply stretching the neck with the left hand, we would contract the right-sided posterior neck muscles against resistance provided by our left hand. Then we would use our left hand to bring the neck into a position of greater stretch (flexion and left lateral flexion).

Stretches that utilize the Golgi tendon organ reflex are called *contract relax* (CR) stretches. They are also known as post-isometric relaxation (PIR) and proprioceptive neuromuscular facilitation (PNF) stretches (Note: AC stretching is also sometimes known as PNF stretching). The isometric contraction of a CR stretch is held between five and 10 seconds, and three to four repetitions are usually performed.

Any stretch can have a neural inhibition component of CR or AC stretching added to it. Logistically though, it is sometimes easier to convert a stretch into one or the other depending upon the mechanics of the situation. Because both CR and AC stretching require active contraction of musculature, they have the added benefit of strengthening musculature and improving neural pathways from the central nervous system.



For a 10–15 minute stretching routine, look to figures 1–12 on pages 33–34 and 36.



WOULD YOU LIKE MORE INFORMATION ABOUT HOW SELF-CARE CAN HELP MASSAGE THERAPISTS PREVENT INJURY? LOOK TO THE “LIVING WELL” SECTION OF THIS ISSUE, STARTING ON PAGE 15. THERE YOU’LL FIND A VARIETY OF IDEAS TO KEEP YOU AT YOUR BEST.