Athletic trainers and therapists commonly incorporate a variety of therapeutic modalities such as ultrasound, electrostimulation, and hydrotherapy into their injury-treatment protocols. Recent trends in sport rehabilitation include using a more hands-on approach to treating athletes' injuries. Therapeutic massage is such an approach and can be used effectively in combination with other modalities to create physiological and psychological benefits for athletes (Birukov, 1987; Fritz, 1995; Goats, 1994; Samples, 1987). Throughout our experience as athletic trainers and massage therapists, we have found that therapeutic massage has been beneficial in treating injuries and returning athletes quickly and safely to preinjury-level competition. This article explains various therapeutic massage techniques aimed at treating three common injuries: hamstring strains, chronic lateral ankle sprains, and biceps tendinitis.

Hamstring Strains

Hamstring strains can be debilitating to athletes, removing them from competition for a significant period of time. Consequently, athletic trainers and therapists must use effective treatment modalities to return the athlete to play as soon as possible. After the inflammatory response phase of healing has subsided, therapeutic massage can be used with other modalities to alleviate pain, promote blood flow to the muscles, and increase range of motion (Fritz, 1995). With the athlete prone and his or her lower leg extending off the end of the treatment table, place a towel roll proximal to the knee. Apply a heat modality such as a hot pack for more superficial strains or ultrasound for strains deeper in the muscle tissue. We have found that heat modalities, particularly ultrasound, promote relaxation of the muscle tissue, which facilitates the massage delivery.

Next, apply a lubricant to your hands and then to the muscles by using effleurage strokes (long, gliding, superficial strokes) toward the heart for about 1 min. Commercial therapeutic massage lotions are suggested because they are not as readily absorbed into the skin, reducing friction. While performing effleurage, your hands should conform to the tissue at all times. Once the muscles are relaxed and you can no longer palpate any undue tension around the injury site, place a cuff weight around the athlete's ankle to promote a passive stretch to...
the muscles. The cuff weight should not “weigh down” the lower extremity to the point that the muscles reflexively contract. Continue with deep effleurage strokes, concentrating on and around the injury area for approximately 5 min. If the athlete has a palpable area of muscular spasm, remove the lubricant from the area and apply deep friction massage transverse to the muscle fibers in approximately four 30-s applications with the heel of one hand (Figure 1). During friction massage, move only the underlying tissue, not the skin over it. Next, remove the cuff weight and continue with deep effleurage strokes for about 2 min while the athlete actively engages in knee flexion and extension (you must move your hands and body up toward the athlete’s hips as the athlete reaches full knee flexion; Figure 2).

After this treatment, apply ice massage in long, deep strokes, parallel to the muscle fibers, for approximately 10 min. Ice massage, ice packs, or cold whirlpool treatments should always follow transverse friction massage to lessen or prevent delayed-onset muscle soreness, which will most likely occur after this technique. If at any point in the treatment the athlete experiences significant pain, discontinue therapeutic massage and continue with ice massage. Therapeutic massage for a hamstring strain takes as little as 10 min per session, yet it is a beneficial component of the treatment protocol. One treatment session per day will be adequate to promote increases in pain-free range of motion, usually after about five treatments.

**Chronic Lateral Ankle Sprains**

Athletic trainers and therapists often treat athletes who have chronic lateral ankle sprains with significant scar tissue. Scar tissue can develop as a result of lack of appropriate treatment and rehabilitation for the acute injury. Excessive scar tissue around the ligaments (particularly the anterior talofibular ligament), along with decreases in range of motion and neuromuscular...