"Injury Prevention"

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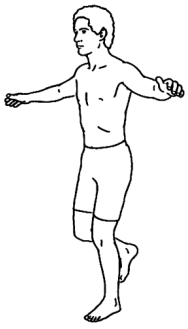
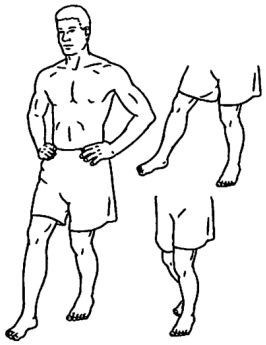
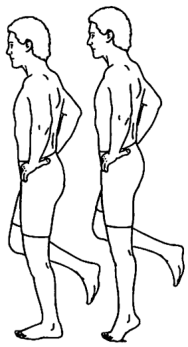
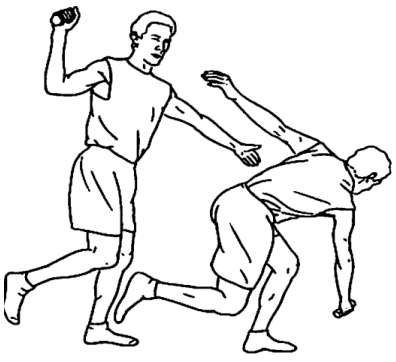
Tips to Avoid Lower Leg Pain Part II

The foot, ankle, and lower leg muscles are faced with the challenge of stabilizing and controlling the impact and advancement of our lower limbs as we run. On long walks or runs, especially on uneven surfaces, this can be very demanding and may lead to overworked or inflamed tendons, muscles or ligaments. Performing routine exercises that simulate these demands is an effective way to prevent and treat many common overuse injuries. Specific balance, "eccentric", and light plyometric exercises are typically the most appropriate for runners. An eccentric muscle contraction is one in which the muscle is lengthening, sometimes referred to as the "negative". Some examples would include exercises in which you lower your body slowly such as single leg squats or lunges. These movements also challenge your balance at the same time. It is advised to perform these exercises after running so that your muscles aren't exhausted prior to your run. The pictures below illustrate the proper technique. To effectively supplement your running, try to complete a higher number of repetitions (3 sets of 15-20 reps) or longer duration holds when balancing (3-5 bouts of 30-60 seconds) to build endurance. Exercises should be continued until the lower extremity muscles are thoroughly fatigued, without causing pain. Figure 1 demonstrates balancing on one leg. For more of a challenge attempt with your eyes closed, or while rotating your head or body side to side. In Figure 2, bend the knee slightly and extend the opposite leg to the front, the back and the side. Figure 3 shows a single leg heel raise for calf strengthening. Normal strength would be 20 repetitions. Perform the heel raise with your knee slightly bent to strengthen your soleus, the other primary calf muscle. Another excellent calf exercise (to be performed after running) is walking on your toes until fatigued. Figures 4 and 5 demonstrate more advanced balance exercises that incorporate an eccentric strengthening component as well. It is important to perform these exercises to tolerance/fatigue and not while experiencing pain. Feel free to contact us directly with specific questions or for recommendations on exercise progressions or plyometrics.









Dave and Kristy are avid runners, MTC members, and owners of Siesta Key Physical Therapy. The orthopedic

section of their physical therapy education included extensive instruction in foot and ankle biomechanics and they have worked with many runners in their 10 years of practice.