

## ATHLETIC INJURIES

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The most prevalent injuries from long distance running seems to involve the foot and achilles tendon. Strains of the arch, bruises of the heel and foot, and blisters are the most common foot problems. To lesser extent shin splints are troublesome for some runners and occasional sore knees will develop. Muscle cramps, of course, continue to be an enigma to almost every runner who has trained hard over a period of time.

Many of the problems here discussed may be somewhat difficult to prevent because we don't know they are going to happen until they do. However, past experience will tell us our weaknesses and our susceptibility to particular injuries. In early conditioning and in resuming workouts after an extended lay-off, it is wise to remember what these are and take precautionary measures to avoid the same problems. In general, this writer feels the best single preventive measure for problems from the foot up to the low back is proper footwear for the individual. The shoe should fit, give proper support for the arch, and provide sufficient cushion for the feet to prevent bruises and sore knees and hips from pounding on hard surfaces.

Remember, our muscles and other structures were trained in our younger years to support say, 150 pounds.

Now, beginning our 'come-back trail', our muscles have not only aged and atrophied, but we are perhaps 15-20 pounds heavier. We must protect these feet, legs and muscles from this extra weight and realize the weakened condition of muscles. Therefore, it is felt that proper footwear is the first most important item in preventing injuries. After this of course is common sense in the training program which will not generally fall within the scope of this discussion.

Arch strains can develop slowly from over-weight, improper training, ill fitting shoes, or a combination of these factors. Strains will occur also from stepping in a hole in rough terrain, or on some object that strains the arch. For support of the strained arch we use 1½ inch tape. We start just behind the ball of the foot, going to the outside and around the foot to pull up slightly on the instep. We usually use three overlapping strips going toward the ankle. We also recommend the "towel exercise" to strengthen the small muscles of the foot which form the arch of the foot. Spread a bath size towel on the floor, stand at one end with the toes just over the edge, then pull the towel up under the feet until the entire length of the towel is under the feet. Repeat ten times. When this becomes easy, add weight to the end of the towel using weights, books, shoes, etc.

Archilles tendon soreness occurs from some form of over stretching or over work. This can happen from running on surfaces that are too soft as wet ground after a rain when the heel will sink down too far. Also, too much hill running before proper conditioning will put a great deal of stress on the achilles tendon. For relief of this condition many times a felt heel lift in the shoe will help. Some will build up the heel on the bottom of the shoe. Also, elimination of the causing factor will help if one can determine what it is. A gradual heel cord stretching program might help. Place the hands about shoulder height against the wall, then slowly allow the elbow to bend, leaning into the wall with the knees straight

and keep the heels on the floor. Lifting up on the toes will help strengthen the heel cords. As they get stronger, place a board under the ball of the foot to do the toe raises. Start with about a one inch board and progress to two to three inch boards.

Heel bruises and bruises of the ball of the foot arises from lack of adequate protection from the shoe. A heel cushion of soft rubber and/or running on grass will help this somewhat. A thin sponge rubber under the ball of the foot usually will eliminate the problem with the ball of the foot. Heel bruises take a long time to get well.

Blisters occur in all sizes, shapes, and places on the feet. Prevention is the best cure. First, the shoes must fit well. Second, recognize 'hot spots' during a workout. We use "Tufskin", skinlube, and foot powder on these hot spots to prevent blisters. When blisters develop, we open with a sterile knife and pack with antiseptic ointment. We leave the skin on for protection until new skin has healed well.

Shin splints usually occur during the early conditioning process and from too much running on hard surfaces. Again, shoes which provide adequate cushioning will help. Many times shin splints are from weak arches. The measure outlined above regarding taping of the arch and the towel exercise will aid in getting rid of shin splints. Severe shin splints may take months of work to eliminate.

Knee problems are not a common problem with long distance running. However, general soreness and aching will happen from over training or hill work. Usually,

easy running on soft grass will eliminate this in a few days. Pain in and around the patellar ligament may develop from hard running up and down hills. This may require a lay-off from two to three days up to two weeks. Then of course, a gradual return to the former peak is required.

Muscle cramps occur to almost everyone eventually. Lack of salt in the tissue fluid and/or plain fatigue will cause cramps. Add extra salt to the diet in the form of salt tablets. Each individual will find out how many tablets to take according to the temperature and stress of the workout. When you stop having cramps you are taking enough salt. One or two is enough for some, while others may need up to twelve or sixteen per day. This need not be taken all at once. Some with each meal will take care of most cramp problems. As the body acclimatizes to the weather and the demands placed upon it by the training schedule, less salt will be needed. However, any extra hot day, or extra heavy session will require a little extra salt replacement in the body. If you feel you are taking enough salt but are still tired from the previous day's work-out then you are susceptible to cramps and other injuries regardless of salt intake, Gatorade, or any home brew you might like. The body just needs time to recover from fatigue no matter what you eat or drink or do. Sleep and rest (easy running) are essentials in recovery from fatigue.

Treatment of strains of the arch, ankle, and knee consists of ice-packs or ice water to the affected part for 20-30 minutes. Contrast baths also are quite helpful. Two minutes in ice water and three minutes in hot water for a 20-30 minute period is the usual procedure.

For cramps and other muscle soreness use hot baths or whirlpool. The water should be 104-110 F. Time in the hot water is ten to fifteen minutes. An energetic and understanding wife or girl friend can pleasantly aid with gentle massage to relieve muscle soreness.