

# PREVENTING SOFT TISSUE INJURIES IN TRACK AND FIELD

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“Winning isn’t complicated, people complicate it.”

We all fight the battle of getting kids to warm-up properly for practices and meets. Sometimes it’s like pulling teeth to get the kids to properly warm-up and warm-down their bodies for the stresses of training and competition and prevention of soft tissue injuries. Today just telling kids to do it, isn’t good enough. Athletes today want to know why they are doing it, what they are going to get out of it or how will it help them improve.

Recently at the National USATF Convention in Los Angeles, one of my mentors, Tony Veney, the great sprint and hurdle coach at the University of Oregon, shared with me some information regarding common injuries to sprinters in track and field. The information was concise and easy to understand. As a coach who loves track and field, I absolutely hate seeing any athlete suffer soft tissue injuries. Nothing is more damaging to the sport, than to see great athletes sitting on the sidelines, missing the opportunity to compete due to injuries. Hopefully this information will help your athletes stay healthy.

There are many causes of pains in soft tissues:

cellular TRAUMA

*strain*

*overload*

*sprain*

*fatigue*

*blunt trauma*

*gross trauma*

*stress*

*stress*

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*acute*

*overwork*

*chilling*

*postural stress*

*repetitive*

*mental*

*poor sleep*

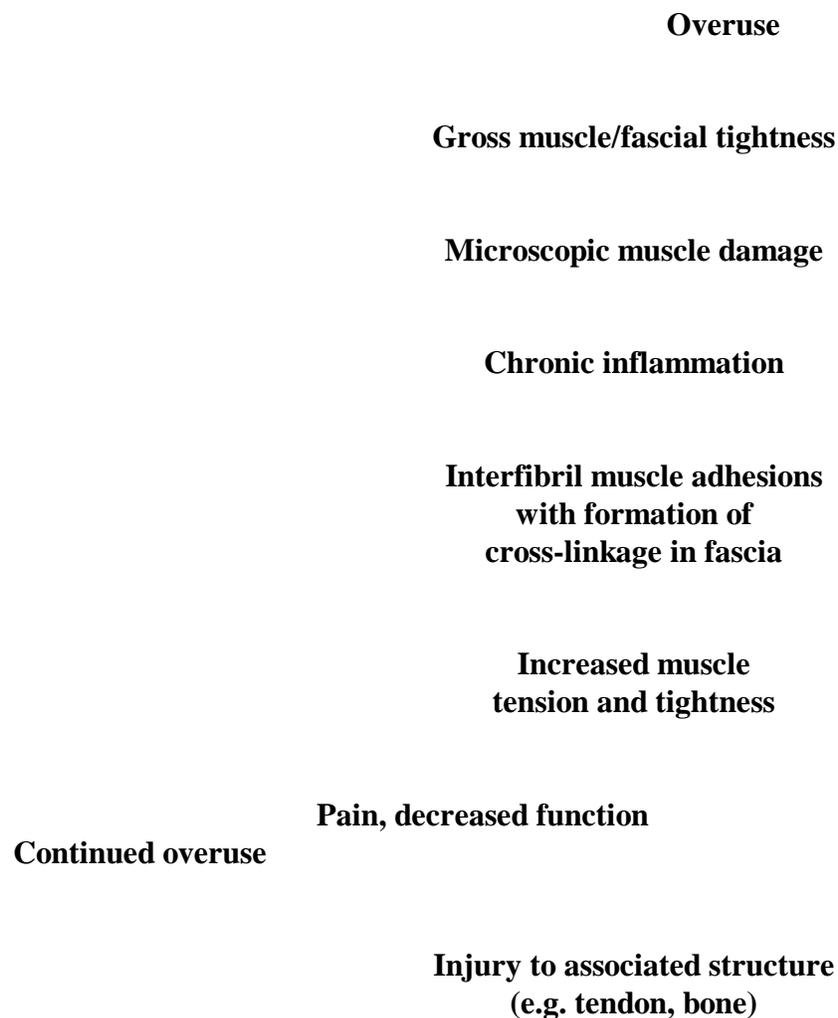
*depression*

*anxiety*

*endocrine imbalance*

*Caffeine, nicotine, alcohol will impede blood flow (vaso constrict). Vessels will decrease rate of repair, decrease extensibility of tissue and decrease blood volume.*

Below is a flow chart of overuse/repetitive stress to soft tissues:



The principles of treatment are quite simply:  
First when in doubt R.I.C.E. REST area in question for 1 hour to 72 hours. Ice area in question 20 minutes every 2 hours for initial 72 hours. Compression will decrease

inflammation. Elevation will decrease inflammation. Evaluate the area every 12 hours. If there is no change, return to the trainer and/or physician.

As a coach, our first and foremost responsibility is to maintain the health of our athletes. Even talking about the above information sends shivers up my correctly aligned spine. Your first battle may be getting the kids to warm-up properly. They have just raced from class, their friends and a society that is in 5th gear. Taking the time to sit down and explain the following to them, may save countless hours of re-habing soft-tissue damage.

Before any type of track and field training begins, it is crucial that the spinal column be in correct alignment. Soft tissues are subject to stresses from physical, emotional as well as structural stresses placed upon the anatomy. Incorrect alignment will lead to major problems as the training cycle progresses. The purpose of warm-up is to prepare the body for exercise. General and specific exercises are to be performed for 15-30 minutes. The warm-up should be sufficient enough to produce some mild sweating without fatigue. General exercise for a warm-up can be:

1. Jogging
2. Calisthenics
3. Resistance exercises

Here are 12 reasons to warm-up prior to physical activity aids in:

of oxygen to tissues

1. Increased blood flow to the muscles
2. Increased oxyhemoglobin/delivery

to smoother muscle  
leading to increased mechanical efficiency.

3. Decreased vascular resistance
4. Enhanced cellular metabolism
5. Reduced muscle viscosity, leading to smoother contraction

impulses

6. Increased speed of nerve impulses
7. Increased sensitivity of nerve

receptors

8. Increased sensitivity of nerve

sensitivity of muscle

9. Decrease activity of alpha fibers and to stretch

increased range of  
decreased stiffness of connective tissue leading to

10. Decreased number of injuries due to motion,

greater forces of length of stretch required for tears to occur

11. Increased relaxation and

concentration

12. Increased cardiovascular response to exercise

to sudden strenuous

The most overlooked area of practice is the warm-down. The warm-down should take place for 10-20 minutes after training, bringing the core temperature down and return the pulse rate to less than 100 beats per minute. The warm-down will expedite the removal of waste products. Part of the warm-down for some of the athletes I have worked with includes soft-tissue massage therapy. Sports massage may:

tissue

1. Promote efficient scar formation in post acute healing of soft injuries

2. Reduce focal regions of intramuscular tissue thickening

3. Reduce spasm secondary to pain

removal of

4. Reduce pain by, reduction of excess tissue tension, aiding in waste products that irritate nerve endings

Rest is truly the most overlooked part of training. A century ago, Americans were sleeping 8.9 hours a night. Today, the national average is 7.1 hours. 30% percent of Americans are getting less than 6 hours a sleep a night. Guess who some of those 30% of Americans are?

With so many greats track and field athletes in our state, and a great season just ahead, hopefully we all can keep the injuries to a minimum and performances to a maximum. Best wishes for a healthy Track and Field season 2014.