

TRACK AND FIELD SEASON: Hamstrings, IT Bands, and Stress Fractures

Spring Break has come and gone, and the temperatures in Oklahoma are steadily climbing. Track and Field season is now officially upon us. And, as many athletes who compete in this outdoor sport have been in pre-season training for at least the last 2-3 months, now is also the time that chronic injuries tend to show up as well. Whether as a result of inadequate flexibility, poor mechanics and form, or even something as simple as worn out shoes, the previously enjoyed post-practice status of aches and soreness has now become the pain and the irritation of a chronic injury.



Now whether or not you or your athletes are currently dealing with these types of injuries or not, the interventions discussed in the upcoming articles should still be of use to you. Because, where the body is concerned, an ounce of prevention can really turn out to be a pound of cure in the long run. Little interventions, such as an effective 5-10 minute warm up and stretching program and/or periodically having your sprinters and distance runners ride a bike for the day's workout instead, can make all the difference in a 3-4 month season. In other words, there is no time like the present to be proactive. As track and field competitions can make for a lengthy season, making it to the end without injury, or even with your team now recovered from injuries sustained throughout the season can make all the difference in the final seconds of the final meets.



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Dynamic Hamstring Flexibility

Static Stretching: Involves placing a muscle at its greatest possible length and then holding it for a period of time (e.g. 10-15 seconds).

Dynamic Stretching: Involves moving a limb from a neutral position to its end range where the muscles are at their greatest length (i.e. stretch) for a brief second and then moving the limb back to its original position.

In other words, dynamic stretching is a good way to encourage the muscle to be flexible during activity. And, research tells us that it makes our sprinters and hurdlers more flexible and faster. So, here are couple of excellent stretches to increase dynamic hamstring flexibility.

Walking Alternating Toe Touches



Alternating Sprinter's Stretch

Supine Knee Extension



Pictures obtained from the Princeton University Athletic Medicine Dynamic Flexibility Program

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IT Band Tendinitis

As an anatomy review, the IT band does just what it sounds like; it runs from the Ilium (i.e. pelvis) down the outside of each leg and attaches on the lateral side of the top of the tibia (i.e. shin bone). Tendinitis of the IT Band usually comes due to outer hip muscle weakness and is primarily seen in females. However, it is also prevalent in individuals who have a supinated (i.e. rolling out) foot upon heel strike. Regardless of the cause though, when the IT Band is inflamed it actually tightens slightly, progressively scars, subsequently hurts, and sometimes even pops during activity. So, here are a few measures commonly used both as preventative or as possible treatment interventions based on the individual case.

Hip Abduction Strengthening:



Side-Lying Straight Leg Raises

Side-Lying Planks



Hip Abductor Stretching:

Static:



Dynamic:

-Individual Leg Swings: Side to side

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Lower Leg Stress Fractures

In order to reduce your team's risk for stress fractures in the foot or lower leg, remember that the entire lower extremity is designed for force absorption and transfer. Therefore, ensuring proper cushioning in one's shoes and not running a pair of shoes past an average of 300 miles are good places to start. Likewise, look at your feet. Higher arches need more arch support. In addition, the heel that rolls out (i.e. supinator) or the heel that rolls in (i.e. pronator) needs to be in a shoe that returns the heel to a neutral up-and-down position upon heel strike. For example, the athlete whose heel rolls out (i.e. supinator) will subsequently increase the overall stress on the outside lower leg bone, the fibula. And, in turn, the athlete whose heel rolls in (i.e. pronator) will subsequently increase overall stress on the inside lower leg bone, the tibia. This part is all about force transfer.



Therefore, make sure your athletes are in the right shoes. Likewise, periodically strengthen and stretch the lower leg with the following stretches and exercises as doing so can dramatically increase speed, longevity, and reduce injuries at the same time.

Strengthening:

-Heel Raises, Heel Walks, Toe Walks, and Hill Sprints

Stretching:

-Calf: Straight Knee and Slightly Bent
-Anterior Tibialis: Sitting on Your Heels

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