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Fun 4th of July Facts:

- In July of 1776, there was an estimated 2.5 million people living in the new United States.
- The first 4th of July party held at the White House was in 1801.
- Benjamin Franklin wanted the turkey to be the national animal but was out-voted when John Adams and Thomas Jefferson chose the bald eagle.



Achilles Tendon Rupture

With all the FIFA World Cup Action you may be wondering where David Beckham is. He ruptured his left Achilles tendon in March during a match. The Achilles tendon is formed from the tendons of the Gastrocnemius and the Soleus (calf muscles). The tendon inserts on the Calcaneus (heel bone) and its primary function is to plantar flex the ankle. It acts as an energy provider during locomotion. The Achilles tendon helps facilitate the push-off phase of the normal gait cycle. These muscles provide a significant amount of force during the push-off phase and if the tendon is weak at

any location then it is at risk for a tear or a complete rupture. Typical injury involves at least one of the following scenarios:

- An abrupt change in direction and speed
- Going from resting to abrupt take-off
- Abrupt dorsiflexion, rapid and forced plantar flexion then dorsiflexing the plantar flexed foot.

Other sports that involve rapid running and cutting include basketball, football and tennis. These sports all put the Achilles tendon at risk for injury.

For professional athletes and younger patients, surgical repair is the typical intervention. If left unrepaired, the re-rupture rate increases by about 20 to 30%. Whether or not surgical repair is performed, Physical Therapy intervention will most likely be necessary. In the first few weeks post-injury or post-surgical, the patient will typically be immobilized and be non-weight bearing. Once the immobilizer is removed Physical Therapy interventions can begin with stretching and mild strengthening exercises.

Medial Tibial Stress Syndrome

Also known as shin splints, Medial tibial stress syndrome is defined as pain and edema in distal 2/3 of the tibia (shin bone). The pain and edema are a result of repetitive micro trauma to the tibialis anterior muscle that causes small tears in the periosteum surrounding the shaft of the tibia or tears in the skin attachments to the deep fascia of the leg. Shin splints can

also result from bowing of the bone. Those that regularly exercise have a greater cross-sectional area of their shin bone than those that do not regularly exercise. The weaker and thinner bone is more susceptible to bowing and causing shin splints. It is a common overuse injury for those with an intense walking or running regimen or for those in the military. Shin

splints are twice as common in women than in men and account for 13% of all running injuries. The initial treatment for medial tibial stress syndrome would be RICE: Rest, Ice, Compression and Elevation. Physical therapy interventions for shin splints can include adjusting body mechanics, soft tissue mobilization, stretching and strengthening exercises.