

## “ANKLE SPRAINS CAN LEAD TO CHRONIC PAINS”

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Ankle sprains are common injuries that have the potential to progress to chronic ankle pain. The most common ankle sprains involve the lateral supporting ligaments: the calcaneofibular, anterior talofibular, and posterior talofibular. The lateral ligaments resist anterior displacement and internal rotation of the ankle. The medial ankle is less likely to be strained due to the strong deltoid ligaments: the tibiocalcaneal, anterior tibotalar and tibionavicularis. The deltoid ligaments restrict lateral dislocation of the ankle. The combination of downward flexion and inversion is the most common action for ankle sprains. Prompt medical attention is essential to evaluate the stability of the ankle. An unstable, non-treated ankle is most likely to progress to chronic ankle pain.

There are three types of ankle sprains: grade I, grade II and grade III. Grade I sprains consist of overstretched ligaments that are not torn and associated with minimum pain and swelling, little or no loss of function, the ability to weight bear and no mechanical instability. Grade II is partial tear of the ligament and characterized with moderate pain and swelling, bruising, some loss of motion and function, increased pain with weight bearing and mild to moderate instability. Grade III is a complete tear of the ligament, correlated with severe pain and swelling, bruising, inability to weight bear and moderate to severe instability.

Ankle sprain diagnosis and treatment is dependant on a thorough medical history, physical examination and specific ankle sprain tests. To determine if x-rays are needed, the Ottawa ankle rules are used. They state that radiographs are necessary if the patient has pain with touch to the lateral or medial area of the ankle and inability to weight bear. The x-rays are taken to rule out other complications such as a disruption of the ankle syndesmosis (the higher ankle ligament) or a fracture. Specific tests such as, the anterior drawer test, talar tilt test, side-to-side test, and Thompson’s test are utilized to assess the ligament damage to the ankle and which grade of an ankle sprain has occurred. The available treatment options are dependent upon the grade of the ankle sprain.

The management for Grade I, II and III ankle sprains consists of RICE (rest, ice, compression and elevation), medication, crutches, casting and physical therapy. The compression element of RICE can be in the form of

an air cast, foam stirrup or ace bandage. Medication, such as, Acetaminophen or NSAID’s (non-steroidal anti-inflammatory drug) is recommended for pain relief and swelling. Crutches are often used until the patient is pain free with weight bearing. Casting is most appropriate for grade II and III sprains with the cast lasting for 4-8 weeks. Each grade will require a functional rehabilitation program consisting of exercises to increase range of motion, muscle strengthening, and proprioception. Some grade III sprains progress to surgery if conservative measures fail and symptoms

persist months after the injury. Surgery will depend on the number of ligaments torn as well as the age and athletic participation of the patient. Surgery options include arthroscopy or reconstruction of the ligaments. Prompt mobilization with a rehabilitation program is necessary to return to activity and prevent chronic instability. Patients may return to activities when they achieve pain free range of motion and weight bearing. It may take weeks to months for the ankle to heal completely.

The prognosis for ankle sprains are excellent with the proper treatment and patient compliance; however, it is common for acute ankle sprains to progress to chronic ankle pain. The etiology of chronic ankle pain can be the result of re-injury from weakened ligaments or other conditions such as a fracture. It is important that patients receive immediate medical attention if they have symptoms of an ankle sprain. Adhering to the ankle sprain guidelines will lessen the possibility of having chronic ankle pain.

Tammy D. Moore, PA-C is a recent graduate of Daemen College, located in Amherst, New York, where she received her Master’s of Science in Physician Assistant Science. She completed a year rotation through the areas of pediatrics, internal medicine, psychiatry, cardiology, gastroenterology, emergency medicine, general surgery, orthopedics, family practice, and OB/GYN. It is through this experience that Tammy developed her greatest skill and interest in the field of orthopedic surgery. The team at Greater Hartford Orthopedic Group is able to more efficiently treat an injury or condition with a physician assistant of her knowledge base, proficiency and caliber.

