

## Why Does My Ankle Still Hurt?

Ankle sprains account for approximately 35% of all sports injuries and cost 2 billion dollars annually to treat. 80% of those injured will have a recurrent sprain within 12 months and 40% will have persistent pain and instability. This persistent disability has been named chronic ankle instability (CAI). Additionally, a condition named functional ankle instability (FAI) may follow an ankle sprain. FAI does not have ligament structural damage but results in persistent instability of the ankle.

CAI is caused by mechanical damage or functional impairments or both. FAI is related to impaired neuromuscular control and characterized by impaired kinesthesia and altered muscle recruitment patterns and may result in whole body nervous system adaptation strategies. These altered patterns may result in compensations in the function of both knees and hips to maintain balance. This would indicate a central nervous system mechanism, as opposed to unilateral, local ankle impairment.

The use of the contralateral limb as a

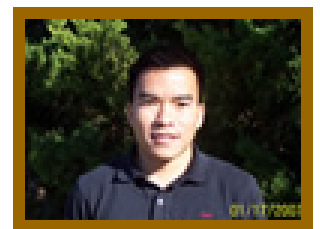
reference for normal balance may not be appropriate, as it too, may be impaired.

The traditional rehabilitation of ankle sprains has focused on treatment of the ankle and the resolution of pain and swelling and local muscle strengthening. These programs are incomplete and do not utilize the current knowledge of the importance of the restoration of balance and neuromuscular control for the resolution of instability symptoms. A thorough examination of the dynamic control of both lower extremities can identify the deficiencies, which will guide the treatment. A dynamic postural control program should be completed following an ankle sprain, or any injury to the joints of the lower extremities, to restore functional stability prior to approving a person's ability to return to playing their sport.

Dynamic and static balance training is an essential component of ankle rehabilitation. This will improve postural control, which is a measure of increased risk of re-injury, decrease the recurrence of ankle injuries and prevent post traumatic arthritic

compromise of the talar articular surface. The dosage is determined by injury severity, concomitant injuries, demands of the individual's activities and the person's physical condition and motor abilities. There is a series of functional hopping, jumping, landing and reaching activities of increasing complexity which measure and develop improvements in functional ankle control. These should be used to assist in the determination of when an athlete may return to play.

**OPTM physical therapists** are highly trained in the development of best practice rehabilitation programs. We continue to develop new skills and update our programs through our monthly continuing education program. We will always strive to be at the front of the evolution of physical rehabilitation. We are here to help you be your best.



**Congratulations Luc on becoming an Orthopedic Certified Specialist**