

Running Resiliency: Injury management for all runners

Brief Course Description

This two day practical course is a thorough and extremely practical best-practice management of the injured runner. The course emphasis is on the manipulation of load and stress management in our injured patients and integrates running biomechanical principles within the biopsychosocial framework.

Participants will be comfortable performing a thorough analyses of all the factors contributing to stressors on a runner, gait analyses (with potential modifications), return to run programs, running training programs and exercise prescription for both performance and injury management. Participants will be comfortable changing an injured runner's training program to keep them running and will gain proficiency in designing training programs that also function as rehabilitation programs.

Course Objectives:

1. Learn the common running injury risk factors and means of modifying those risk factors.
2. Understand the biomechanics of running, how those biomechanics relate to injury and how those biomechanics can be changed.
3. Become very comfortable and proficient in performing a treadmill analysis of a runner's technique.
4. Deliver a best evidence approach to exercise prescription for pain relief, increasing load tolerance, injury management and performance and participants will become comfortable adapting exercise programs for the individual needs of their patients.
5. Learn how to keep a runner running when in pain and learning when a runner must rest
6. Learn to building physical and psychological resiliency in patients through appropriate education
7. Improve critical thinking skills related to the application of the evidence base in running injury management

Method of Instruction

This course is a mix of hands on practical, lecture and discussion. The lecture format is designed to encourage discussion and critique of the research in the area of running injury. Case studies are used to allow participants to apply the concepts introduced in the lecture.

Running Resiliency Outline

- A. Course Overview (9:00 - 10:00 am)
 - a. Load management
 - b. Symptom/Stress modification
 - c. Exercise Prescription
 - d. Cognitive Restructuring

- B. The messy world of running injury causation (10:00 - 11:00am)
 - a. Review of common theories on running injury
 - b. Birdseye view of running related injury research

- C. Running Biomechanics Overview (11:00 -12:00pm)
 - a. Basics of running mechanics
 - b. Kinematic and Kinetic description of running
 - c. Muscular loads associated with running

- D. Common running injury condition summary (1:00 - 3:00pm)
 - a. Pathology of common running injuries
 - b. Review of tendinopathy principles
 - c. Joint and muscle injury review
 - d. Framework for injury management

- E. Bone Stress Injuries (3:00 - 4:00pm)
 - a. Causation and pathology of BSI
 - b. BSI injury framework
 - c. Return to running plans for BSI
 - d. Potential prevention and management strategies

- F. Run Training Plans (4:00 - 5:00 pm)
 - a. Introduction to training program design

- G. Comprehensive Capacity - Exercise Prescription for the Injured Runner (9:00 - 11:00 am)
 - a. The limited role of exercise prescription and minimal effective dose for common injuries will be reviewed

- b. The case for simple exercise loading for common running related injuries will be made
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- H. Running gait modification (11:00 -12:00 pm and 1:00 - 2:00 pm)
 - a. Review of gait modifications
 - b. Influence of modifications of running parameters
 - c. The symptom modification guide to running retraining
 - d. Review of clinical studies on gait retraining
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- I. Load Management and Training Variables (2:00 - 3:00pm)
 - a. macro load management and injury evidence
 - b. *This important section will introduce to the participant to the various training program and components of traditional running programs. An evaluation of the relationship between all loads (mechanical and psychosocial) and injury risk will be explored. Injury case studies will be shown to demonstrate how training variables can be manipulated to address common running injuries.*
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- J. Strength and conditioning for runners (3:00 - 4:00 pm)
 - a. Basics of exercise prescription for performance and health