

# BIOMECHANICS OF INJURY CAUSATION

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**Biomechanics of Injury Causation** is a one-hour course designed to help the participant understand the mechanics of tissue injury and the injury potential associated with different incident scenarios. The course will provide some familiarity with human anatomy, and will provide a variety of examples in which claimed injuries are analyzed in light of the incidents that reportedly caused them, so that personal injury allegations may be more clearly understood.

- I. General Introduction** (5 minutes)
  - a. Course Objectives
  - b. Anatomical Orientation
  
- II. Tissue Biomechanics** (10 minutes)
  - a. Tissue Properties
  - b. Bone
  - c. Muscle
  - d. Ligaments and Tendons
  
- III. Tissue Injury** (10 minutes)
  - a. Fractures
  - b. Sprains
  - c. Strains & Muscle Tears
  - d. Brain Injury
  
- IV. Anatomy and Injury Biomechanics** (20 minutes)
  - a. Upper Extremity
    - Wrist
    - Elbow
    - Shoulder
  - b. Lower Extremity
    - Ankle
    - Knee
    - Hip
  - c. Spine
    - Disc
    - Vertebrae
  - d. Head
    - Skull
    - Facial Skeleton
    - Brain
  
- V. Investigation Methodology** (10 minutes)
  - a. Assessment of Situation Mechanics
  - b. Medical Record Review
  - c. Analysis
  
- VI. Wrap-Up** (5 minutes)