

Biomechanics & Medical Devices

BE Biomedical Engineering, MS Mechanical Engineering 37+ years in Industry, Biomechanical & Orthopedic Biomechanics experts. Members of the American Society of Mechanical Engineers, the Orthopedic Research Society, the American Biomechanics Society, the International Biomechanics Society, the American College of Sports Medicine, American Materials Society, Society of Automotive Engineers

Analysis of traumatic injuries related to:

- Falls and fall recovery
- Vehicular collisions
- Sports and recreation
- Occupation or workplace
- Sports, recreation and occupational overuse or injury
- Projectile impacts
- Failed medical implants, assistive devices, orthotics, or consumer products
- Assaults and fights

Example Reviews:

Use of injury evidence to reconstruct injury event:

- Were injuries claimed caused by the event (MVA, fight, fire, et cetera)?
- Are injuries claimed consistent with evidence?
- Could an injury have occurred as testified? (Break testimony stalemate)
- In an MVA, would injuries have been similar, different or fatal had a protective restraint been used and/or had functioned properly?
- Were forces sufficient to cause injuries claimed?
- Was a specific weapon used to cause injury?
- Were injuries pre-existing?

Medical devices and consumer products:

- Was there a defect in the device design, manufacture or installation that caused the injuries claimed?
- Were warnings and instructions for use defective in a manner that resulted in misuse which caused the injuries claimed?

Human Factors

PhD Human Factors/Ergonomics, and Biomechanical expert; Members of the Human Factors and Ergonomics Society, Transportation Research Board, and the American Society of Safety Engineers

- Obviousness/openness of hazard
- Machine/equipment controls and displays

- Warning and instruction adequacy
- Driver emergency response and reaction
- Lighting levels and alarm loudness

Trucks and Buses

Truck Engineers and Designers, crash reconstruction experts, professional truck driver

- Crash reconstruction
- Evaluation of vehicle design, maintenance and operation
- CDL driver hiring, negligent hiring, negligent retention, driver training
- DOT/FMCSR compliance
- Cargo claims, improper loading, forklift and dock safety

Aquatics

Aquatic experts and facility operators, accident reconstruction experts; Certified by National Swimming Pool Foundation, National Recreation & Park Association

- Reconstruction of drownings, diving injuries, falls
- Facility construction, design, and operation
- Lifeguard actions and oversight
- Analysis of chemical handling, disease transmission, and indoor air quality
- Regulation compliance

Sports and Recreation

Designers of sports facilities and products, operators of facilities, trainers, instructors, coaches

- Playground equipment: defects, age suitability, supervision, audits and maintenance
- Injury reconstruction
- Amusement rides and midway games, stability and injury causation
- Evaluation of sports equipment, instruction, operation, and maintenance procedures

Product Liability

Mechanical, Electrical, and Materials Engineers, Human Factors experts, and related professionals in product design, manufacturing, and failure analysis

- Consumer products: hazard analysis, design testing, quality control; appliances, toys, power tools, lawn/garden equipment, medical devices
- Industrial and commercial equipment: machine guarding, responsibilities of manufacturer/employer, heavy machinery, power presses, machine tools, food preparation
- Warnings and safety instructions, product safety signs and labels, adequacy of warnings
- Compliance engineering, national consensus standards (ANSI, ASTM, ASME), federal regulations (OSHA, CFR), regulatory and safety agencies (Underwriters Laboratories, ETL, CSA)

Electrical

Electrical engineers experienced in facility design, construction, maintenance, utility practices, machinery, equipment and consumer product manufacturing; fire and explosion origin and cause.

- Shocks and electrocutions
- Power lines and facilities, utility poles
- Product failures
- Machine controls, interlocks
- Automotive electrical failures
- Electrical explosions/fires
- Evaluation of compliance with codes, practices, standards
- Electrical construction: means, methods, equipment

Racing

Vehicle designers and builders, racers, racing officials; Members of Society of Automotive Engineers, National Hot Rod and Street Rod Associations

- Auto, motorcycle, snowmobile, bicycle
- Modifications to stock vehicles, crashworthiness
- Engines, suspensions, brakes, drive-trains
- Truck layout and operation
- After-market parts
- Injuries to spectators, track officials and workers
- Bleachers, pit areas, impacts, thrown objects, fires