

“Were the reported medical injuries sustained in the motor vehicle accident?”

Injury potential involves both biological *and* mechanical factors

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For files where questions remain regarding whether your client’s injuries are consistent with the motor vehicle accident, you need a solid understanding of both the biological *and* mechanical factors that can influence injury. Getting an accurate picture is like a puzzle that requires that all the pieces are taken into consideration:

First piece of the puzzle: Independent Engineering Reconstruction

Independent Engineering Reconstruction involves a highly technical analysis using engineering principles regarding the relationship between the physics of the accident and the consequences for your client. Precise data points are collected by surveying the crash site which are then loaded into accident simulation software to create an accurate diagram of the collision.

Second piece of the puzzle: Independent Medical Assessment

Independent Medical Assessment involves making an objective assessment of your client’s injuries to determine, for example, if an existing condition had an impact and/or to support the extent of the injuries.

Putting the pieces together requires the ideal combination of biomechanical expertise and medical expertise. A Forensic Biomechanist draws on comprehensive knowledge of the scientific literature on injury tolerances for the human body, as well as software tools to objectively evaluate injury potential.

In terms of medical assessments, a range of Medical Assessors may be involved in providing the medical expertise depending on the nature of your client’s injuries. For instance, a Physiatrist is a physician specialist trained in physical medicine and rehabilitation, which is the diagnosis and rehabilitation of neuromusculoskeletal diseases and associated disabilities (i.e., brain injury, spinal cord injury, soft tissue injuries, fractures, etc.).

It is precisely this kind of collaboration between professional disciplines that provides an accurate picture of whether the reported injuries were due to the accident. For an overview of accident simulation software, please see the attachment.

Overview of Accident Simulation Software

To facilitate accident reconstruction, precise data points are collected by surveying the crash site which are then loaded into accident simulation software to create an accurate diagram of the collision that includes all details through methods like:

- Scaled three-dimensional depictions of the vehicles including specifications like suspension properties, occupant and cargo loading, front and rear brake distribution, braking, and center of gravity
- Final rest positions of the vehicles, skid marks, residual damages
- Assignment of vehicle action sequences like pre and post impact braking, steering, driver reaction, and even wheel lock-up effects
- Three-dimensional animation and overlays of Google Earth photographs

Examples of 3D Visualization

