

Landmines remain one of the major threats to military vehicles and the personnel inside. Improving occupant protection requires a core understanding of how these threats interact with the vehicle and how the vehicle then interacts with its occupants. Both are necessary to establish the possible injury modes and mechanisms of injury. Shock transmission through the floor pan, occupant kinematics resulting in contact with interior components, and inertial loading due to high accelerations are all aspects of the blast loading environment that must be considered.

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Biokinetics can help assess blast impact safety of the occupants by:

- identifying injury causation modes,
- developing injury risk prediction methods,
- conducting full scale tests with instrumented surrogates,
- analyzing body loads and resulting injury likelihood,
- developing custom surrogates and measurement systems,
- testing and evaluating injury reduction technologies,
- developing injury prevention solutions.