



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Protective Equipment

Advanced Combat Helmet and its Suspension System

Researchers at the University of Nebraska at Lincoln, with support from the US Army PM SPE, sought additional characterization of the ballistic, non-ballistic, and blast protection provided by the ACH and its pad suspension system. Researchers sought to better understand the correlation between material properties and dynamic impact response in order to develop an improved helmet suspension system capable of demonstrating increased protection. Results demonstrated that blast waves captured under the helmet were disrupted by the ACH suspension system pads in their approved configuration. Information gathered from this research has directly influenced requirements for the next generation of head protection, specifically the IHPS, which is a subsystem of the SPS.