



U.S. ARMY
RDECOM

Comprehensive Injury Prevention and Analysis Network (CIPAN)



open
campus

S&T Campaign:
Analysis & Assessment
Military Injury Biomechanics

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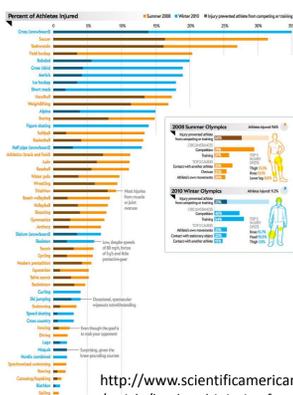
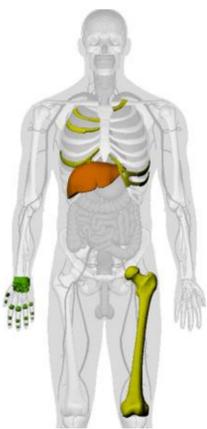
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Objective of CIPAN

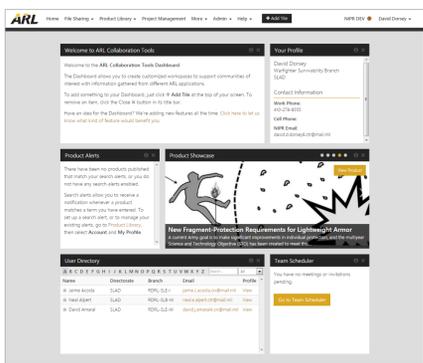
- Develop a multidisciplinary community that focuses on studying injury frequency, mechanism, prevention, treatment, and rehabilitation to foster an open exchange of data and ideas.
- Establish a professional network to collaborate and disseminate information on injury research and analysis to include government, academia, and industry partners.

Mission of CIPAN

- To coordinate and consolidate injury research via a central repository of data, tools, research, and contacts to unite the vast injury research community and build more effective and comprehensive injury prevention programs.
- Promote research and analysis to develop and assess injury prevention, treatment, and rehabilitation systems across multiple causation scenarios.
- Enhance the ability of decision-makers to make informed and effective decisions.



<http://www.scientificamerican.com/article/leg-head-injuries-frequent-at-olympics/>



ARL Capabilities to Support the Collaborative Research Center

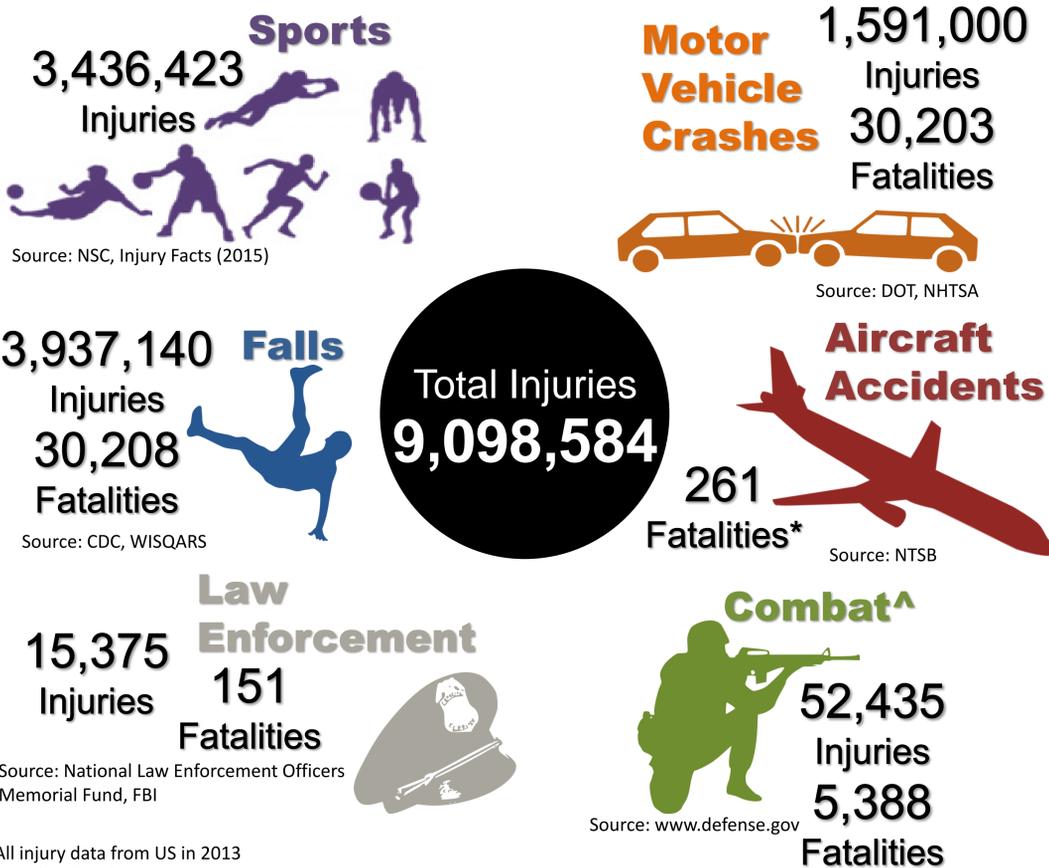
- Provide human vulnerability and survivability expertise, which is a core competency area for ARL, to injury research and analysis within CIPAN.
 - Includes expertise and facilities in ballistic experimentation, computed tomography and x-ray analysis, underbody explosive research, and injury biomechanics laboratories.
 - Software and analysis tools developed by ARL can be leveraged for the use of the entire group, e.g., such as VisualAID and ARL Tools.
 - ARL scientists and engineers provide multi-disciplinary skills in computational modeling, simulations, injury biomechanics, AIS coding, development of injury criteria, and injury causation.
- ARL has existing infrastructure and experience to leverage in creating and managing CIPAN's centralized resources including handling the inherent data restrictions, security, etc. that come with various data sources (personal health information, firewalls, etc)

Complementary Expertise/ Resources/Capabilities Sought in Collaboration

- Researchers and scientists from injury communities and groups from a broad array of injury causing events and a wide range of injury severities and complexities.

CIPAN Benefits

- Accelerate and expand important injury research initiatives while ensuring programs maintain multidisciplinary impact.
- Increase data quality, accuracy, and history across groups, while also reducing redundancies
- Share data, software, and analysis tools such as VisualAID, models, mapping programs (ICD, AIS), exemplar images/ diagrams for injury, library of journal articles, injury data, etc.
- Develop strong, mutually beneficial collaborations with government, industry, and academic partners to work on common interests.
- Share resources and personnel to achieve common goals – post-doc researcher opportunities, developmental assignments with other agencies, experimental facilities.



All injury data from US in 2013
*Fatality data from 2014
^Combat casualty data from 2001 to May 2016