United States Army Aeromedical Research Laboratory

History

1962—U.S. Army Aeromedical Research Unit was established to support Army aviation and airborne activities
1969—Redesignated as a Laboratory (USAARL)
1974—Bioacoustics and vision research programs transferred from the U.S. Army Medical Research Laboratory to USAARL
1977—Mission expanded to include health hazard assessments and countermeasures research on air and tactical ground vehicles and weapons systems
1981—Completed new laboratory facility
1983—Developed crushable ear cups for flight helmet to aid in the prevention of basilar skull fractures
1991—USAARL awarded the Army Superior Unit Service Ribbon for its Soldiers' participation in deployed research protocols
2006—Developed Noise Immune Stethoscope that allowed, for the first time, heart and breath sounds to be heard in high-noise environments
2012—USAARL's 50th Anniversary

For more information, contact:
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Unique Facilities

- Neuro-Otologic Rotary Chair
- Instrumented Marksmanship Range
- Precision Air Rifle Range
- JUH-60A Black Hawk Helicopter
- Helmet Impact and Retention Testing Facility
- Man-Rated Multi-Axis Ride Simulator
- NUH-60FS Black Hawk Flight Simulator
- Electromagnetic Interference Chamber
- Optical Fabrication Laboratory
- Anechoic and Reverberation Chambers
- Environmental Chambers

Conducting medical research to prevent and mitigate Warrior injury

USAARL

Fort Rucker, Ala.
USAARL's mission is to deliver medical research, development, test, and evaluation solutions to air and ground Warriors.

USAARL's vision is to be a premier team dedicated to excellence in innovative aeromedical and operational medical research.

USAARL conducts medical research to develop and provide the biomedical basis for countermeasures that prevent and mitigate Warrior injuries.

USAARL's scientific personnel conduct critical research to solve operational medicine problems. They also provide military developers with information and expertise to enhance the performance and safety of future Army systems.

USAARL specializes in four task areas under the injury prevention and reduction program area.

**Injury Prevention and Reduction Program Task Areas**

**Protect the Warrior from Neurosensory Injury**

- Protect the Warrior from Auditory and Vestibular Injury Due to Blast and Combat Exposure
- Protect the Warrior from Ocular and Facial Injury

The neurosensory task area focuses on improving injury risk criteria, threat and injury analysis, and developing guidelines for protecting Warriors against battlefield and operational threats.

**Warrior Injury Assessment Manikin**

The WIAMan task area is developing the injury criteria and biofidelic standards required for a Warrior-representative test surrogate, along with associated biomedically-validated injury assessment tools for use in live-fire test and evaluation and vehicle development efforts.

**Develop Concussion/Mild Traumatic Brain Injury Assessment and Intervention**

The concussion/mTBI task area identifies appropriate assessment tools and risk and resilience factors that will drive the development of useful assessment and intervention strategies for air and ground Warriors with acute concussion/mTBI and post-concussive syndrome.

**Develop Neurosensory Return-to-Duty Standards and Strategies**

The RTD task area focuses on establishing validated standards and strategies enabling accurate, safe, and rapid decisions regarding the return of Soldiers to specific military occupations after neurosensory injury.