

Human Performance

Military researchers work diligently to ensure a fit and ready force of soldiers, sailors, airmen and Marines. Their work focuses on all aspects of human performance, including physical fitness, nutrition and factors that influence warfighter job performance. HJF works on many human performance optimization efforts.

711th Human Performance Wing

HJF supports the 711th Human Performance Wing/Human Effectiveness Directorate (711 HPW/RH), Biosciences and Protection Division at Wright-Patterson Air Force Base near Dayton, Ohio.

The Human Effectiveness Directorate conducts scientific research to protect warfighters from a broad spectrum of chemical, biological and physical stressors, as well as research focused on physical and cognitive performance.

The 711th HPW/RH team collaborates with the Naval Medical Research Unit-Dayton (NAMRU-D) toxicology group. The synergy between the 711 HPW and NAMRU-D covers a number of integrated human performance challenges and solutions for fields, including:

- Toxicology (e.g., jet-fuel toxicity, neurological toxic impacts and physiologically based pharmacokinetic modeling)
- Physiology (e.g., motion sickness, spatial awareness and environmental stress)
- Cognitive (e.g., recovery after hypoxia, fatigue effects and over-the-counter stimulants).

HJF provides research services and augmentation of core 711 HPW key technology areas in collaboration with leadership,

scientists and principal investigators. Through its innovative research and support infrastructure, HJF meets 711 HPW mission requirements by providing financial and budgetary management, technical staffing, logistics support, and programmatic services.

Naval Medical Research Unit-Dayton

NAMRU-D investigates aeromedical and environmental factors to maximize warfighter performance and survivability. HJF supports the unit with contract research staff members who work on all research efforts by developing and implementing key research plans throughout the portfolio, including environmental and aeromedical health.

The Environmental Health Effects Directorate investigates the toxicity of chemicals and materials used in military operations to determine if there is any detrimental impact on our military and civilian populations. Using the unit's expertise in evaluating inhaled toxins, HJF has supported efforts evaluating various jet fuels.

The Aeromedical Directorate conducts basic and applied research to enhance health, safety, performance and readiness with specific focus on disorientation, fatigue and sleep, hypoxia and vision. HJF assists NAMRU-D's research using their human-rated motion platforms with special interest supporting the Disorientation Research Device.



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Consortium for Health and Military Performance

The Consortium for Health and Military Performance (CHAMP) is the Department of Defense Center of Excellence for integration, translation and education of all topics related to human performance optimization and total force fitness. The consortium, a center at the Uniformed Services University of the Health Sciences (USU), performs translational research for military operational applications, advises on practical warfighter clinical concerns and develops Department of Defense (DoD) policy.

Human Performance Resource Center

The Human Performance Resource Center is an online information resource that focuses on all aspects of service member health to achieve the best performance on the battlefield and at home. The DoD initiative, which aligns under the Force Health and Readiness program, is CHAMP's educational arm.

The center provides information on a combination of approaches and techniques to help service members optimize their performance and carry out their duties safely and effectively. Experts offer guidance on injury prevention, heat safety, deployment stages, stress management and more.

HJF's Strategic Communications & Design team provides technical support for the center's website, which has received nearly 1 million visits since its launch in August 2010. In 2014, as a response to requests from its users, HPRC launched the Operation Supplement Safety mobile app to educate service members and retirees, their family members, leaders, health care providers, and DoD clinicians about the safe use of dietary supplements.

National Capital Area Medical Simulation Center

The University's National Capital Area Medical Simulation Center, or Sim Center, is one of the largest, most advanced simulation centers in the world. Over the past three decades, simulation technology has steadily become a central part of health science curricula around the world, and USU's center is among the trailblazers.

The facility is the only place in the nation that offers every facet of health care simulation under one roof. The simulations allow health care personnel to develop and maintain the cognitive and psychomotor skills necessary to perform medical tasks safely and effectively. Medical students at USU participate in nearly 40 different simulation exercises before they graduate.