



# Advancing Human Performance of Military Personnel



The success of the U.S. military depends on Service members' ability to excel in performing demanding tasks under stressful conditions.

**SOLUTIONS SPECIFIC FOR  
YOUR PROGRAM'S NEEDS**

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The success of the U.S. military depends on Service members' ability to excel in performing demanding tasks under stressful conditions. And they must maintain physical and behavioral health while they do it—and recover as quickly and fully as possible if a challenge is faced.

Advancing the human performance of military personnel in order to achieve Total Force Fitness involves many components, including:

- ▶ Training, conditioning, and equipping to maximize abilities, and to gain resilience from a variety of challenges that may arise
- ▶ Screening and monitoring to spot problems early and head them off, and to recognize where performance is falling short so corrections can be made
- ▶ Intervening to treat those who encounter problems, from acute trauma to the emergence of a chronic condition, and whether in the realm of physical, cognitive or emotional health
- ▶ Recuperating and recovering, both for the healthy who simply need down time, and for those who have come to face significant health challenges and need rehabilitation to return to function and productivity.

Helping people to perform at their best while retaining or regaining health requires new, evidence-based approaches to identify best practices, and implementation of those best practices throughout the military service lifecycle.

The challenges that service members face call for a wide-angle view of the roots of performance and their relationship to all types of health. That means looking beyond the theater of operations to training grounds, work routines, education, healthcare facilities, communities, and families, and every facet of life, including financial, social and spiritual components of wellness. It starts with recruitment, and follows those who serve beyond active duty into their lives as veterans.

## Our approach

Leidos has 25 years of experience developing and implementing human-performance improvement programs for the federal government, including U.S. military customers. We apply expertise in fields like biomedicine, training, clinical care, counseling, personal gear, and much more. And as a major electronic health records integrator for the DoD and VA, we understand how to take advantage of the unprecedented opportunity to create new predictive health and military performance models based on combined EHR and personnel data.

Our programs start with multiple types of research, from basic lab science to field research, informed by rigorous studies based at the level of cells, individuals, populations, clinics and communities. We conduct our research in all environments, from extreme battlefield conditions to time spent relaxing with family, from the harshest places on earth to the local supermarket. And we consider every aspect of the problem, in and out of active duty, and during every type of transition in the life cycle.

Wherever possible we look for ways to apply a data-driven approach to our programs. Our enormous experience in large-scale electronic-health record systems enable us to measure, record, analyze and apply information from longitudinal military, veteran and family health records, contextualized with mission, behavioral and environmental data. We are expert at applying new technologies to that quest, including the latest mobile health devices and techniques, to extend health and wellness monitoring outside the clinic to missions and daily life.

We take a holistic view of performance and health that extends beyond the active personnel themselves to the family members and the many environmental factors that impact them. Helping to ensure that people succeed in tough missions on land, sea and air also requires ensuring that they and their families thrive in the many aspects of both active-duty and civilian life that are important contributors to well-being, as well as to getting the job done.

# TOTAL FORCE FITNESS







# Our solution areas and capabilities

## RESILIENCE

**Goals:** Military members must be able to bounce back from daunting challenges to physical, cognitive and emotional health. They must withstand severe challenges, and when injured deserve the best chances for quickly and fully recovering and healing, and achieving optimal outcomes.

**Capabilities:**

- ▶ Equipment and training programs that help prevent and reduce the severity of injury and trauma that may be encountered on difficult missions in harsh environments.
- ▶ Excellence in operational medicine for in-theater treatment, with special protocols for follow-on care and rehabilitation.
- ▶ A focus on value-based approaches to medicine, which emphasize prevention, early identification of impending issues, and ongoing management of problems to minimize the need for acute intervention later that can carry outsized costs and sub-optimal outcomes. .

## BEHAVIORAL HEALTH

**Goals:** Optimized human performance requires much more than physical health and endurance—cognitive and emotional well-being are equally important factors. Leidos has been working for decades to develop evidence-based best practices in behavioral health, and is constantly pushing the frontiers of behavioral medicine and wellness through data-driven research in the lab, field and community. The results have enabled Leidos to innovate across the range of behavioral health challenges to make a difference in this critical component of performance.

**Leidos capabilities:**

- ▶ Expertise in areas ranging from psychiatry to EHR data analysis to talk therapy to mind-body wellness, grounded in the military-service experience of a large percentage of our own experts and managers.
- ▶ An emphasis on proactively offering needed support and intervention, and introducing new digital and other tools to measure and detect signs of impending issues and crisis.
- ▶ Experience in finding new ways to embed assistance into family life and communities.

## MILITARY AND FAMILY READINESS

**Goals:** Everyone needs assistance at times with the many complexities of everyday life, and that's especially true of those who face the unusually difficult challenges of active duty—and it's equally true of the families who must bravely share the burden. For personnel in the field, the weight of family and financial problems that might be waiting for them between deployments can be a tremendous distraction. Leidos has worked to provide assistance in facing these challenges,

**Leidos capabilities:**

- ▶ Relationship counseling services that give people the best chance of working through their problems.
- ▶ Programs that assist with the range of financial and other practical challenges that Service members and families encounter.
- ▶ Experience with training and problem-solving in the field, on the base or post, and in the surrounding community.



PHYSICAL CONDITIONING

**Goals:** Preparing for the severe demands, challenging environments and frequent deprivations that often go along with deployment requires physical strength, skill and endurance. A comprehensive approach must deliver higher performance and resilience across a range of conditions, while protecting the enormous investment the military makes in its personnel.

**Leidos capabilities:**

- ▶ Developing new best practices for both highly-specialized training programs for elite warriors in extreme conditions, and ongoing force fitness encompassing everything from tough missions to routine jobs.
- ▶ Integrating biomedical and biophysical research, and data-driven studies, to advance the science and practice of fitness and resilience.
- ▶ A wealth of experience and expertise in education, training and conditioning, based on re-examining every standard practice to try to find improvements and innovations.

BIOBEHAVIORAL RESEARCH

**Goals:** From basic biology labs through large population-wide studies, and everything in between, Leidos places rigorous research at the heart of everything it does to support human performance. We investigate every avenue of potential innovation and improvement related to performance and wellness, contributing advances that improve lives, deliver results, and manage costs.

**Leidos capabilities:**

- ▶ An ability to draw on a vast range of in-house scientific expertise and facilities.
- ▶ A long history of collaborations with academic and industrial specialists.
- ▶ Experience in researching lifestyle change, screening protocols, clinical care, protective equipment, digital tools, and critical medications.

Case study

WARRIOR PERFORMANCE

**Challenge:**

Heat illness and heat stress injury in Naval Special Warfare personnel during training represents a significant loss of manpower and money due to the amount invested in developing these elite warriors.

**Approach:**

Develop a Heat Tolerance test to determine return to duty status where previously personnel would have been dropped from the program after a single heat illness incident.

**Results:**

Leidos tested 91 warfighters, performing over 145 tests, with 83% of warfighters passing. Of the NSW personnel that passed, 19 continued their training to become SEALs which represents a return of investment of approximately \$27 million dollars in trained personnel to the Navy.

Some of our customers and programs

- Adolescent Substance Abuse Counseling Services (ASACS) for Pacific Air Force (PACAF)
- Behavioral Epidemiology Research Assessment (BEAR II)
- Biological Defense Research Directorate (BDRD) Genomics and Bioinformatics
- Combat Casualty Care Program Objectives (C3PO) - Naval Medical Research Unit San Antonio (NAMRU SA) '19-'20 Effort
- Comprehensive Deployment Health Research (CDHR)
- Comprehensive Viral and Rickettsial Disease Research Support Services for Naval Medical Research Center (NMRC)
- Computer Assisted Rehabilitation Environment (CAREN)
- Craniofacial Health and Restorative Medicine (CHARM) - NAMRU SA ('19-'20 Effort)
- Expert Program Management Scientific & Technical Spt Svc for Naval Health Research Center (NHRC) Science HQ
- Family Analysis of Parenting Stress Mental Health and Spirituality in a Navy Cohort
- Financial Support Services Naval Health Research Center (NHRC)
- Financial Support Services Naval Medical Research Center (NMRC)
- Health Research Operations and Execution (HEROE II)
- Accession Information Environment Support Services (AIESS) for the Human Resource Solutions (HRS) and Personnel Life-Cycle Support (PLS)
- Immune Epitope and Analysis Resource Program, Immune Epitope Database (IEDB)
- Information Technology Support Services NHRC
- Naval Center for Combat Stress Control Support Services
- Naval Medical Center San Diego (NMCSD) Pharmacist Research Support Services
- NMRC Financial System Research & Development Services
- Naval Submarine Medical Research Laboratory (NSMRL)
- Obstetric Simulation Training and Teamwork (OB-STaT)
- R&D Support for Medical and Simulation Research at NHRC
- R&D Support Services for Warfighter Performance
- Research Support Services - NAMRU SA
- Research Support Services for NMCSD Ophthalmology Department



## WHY PARTNER WITH LEIDOS?

As a leading provider of data-driven, value-based solutions for the U.S. government, we understand our customers and their missions. By bringing our expertise in biobehavioral research, clinical care, support services, and technology to bear, we deliver solutions that provide immediate benefits aimed at our customers' most important needs. Our multi-domain knowledge in the underlying science enables us to take a disciplined, efficient, evidence-based approach that distinguishes our integrated and holistic solutions.

## NEXT STEP

Our human-performance specialists work side-by-side with your team to understand your environment, resources, constraints and challenges, in order to come up with a solution specific to your program's needs. Contact us today to discover how Leidos can help you leverage our expertise and experience to address your challenges and meet your needs.

## ABOUT LEIDOS

Leidos is a Fortune 500® information technology, engineering, and science solutions and services leader working to solve the world's toughest challenges in the defense, intelligence, homeland security, civil, and health markets. The company's 37,000 employees support vital missions for government and commercial customers. Headquartered in Reston, Virginia, Leidos reported annual revenues of approximately \$11.09 billion for the fiscal year ended January 3, 2020.



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