

Training Effectiveness for Physical Augmentation Technologies



S&T Campaign: Human Sciences
Human Capability Enhancement

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Research Objective

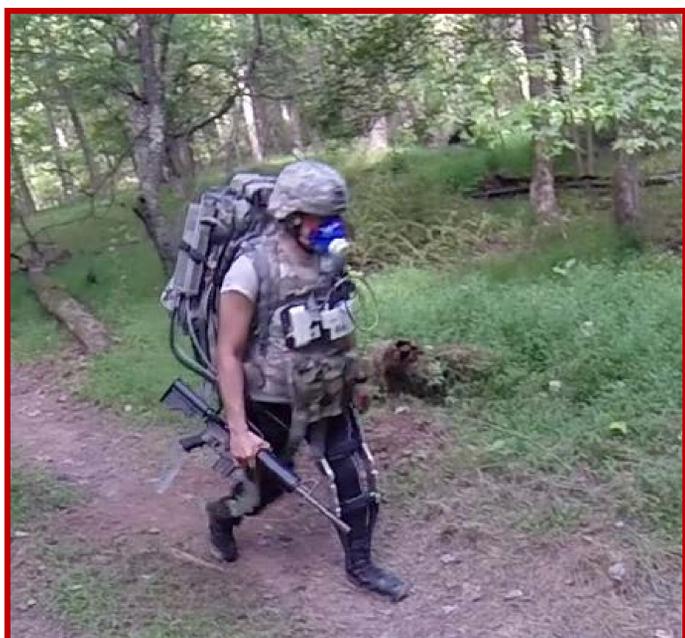
- To understand the effects of training with physical augmentation technologies on the enhancement of Soldier performance.
- Promising concepts for physical augmentation are being developed, however the training to achieve maximum benefit from these systems has yet to be defined and the effects on performance when not using the systems are unknown.



Evaluation and examples of physical augmentation devices

Challenges

- Defining measures of effectiveness
- Identifying indicators for predicting performance
- Individual differences in training needs and resulting performance enhancement



Soldier Performance and Equipment Advanced Research (SPEAR) Facility – Cross Country Course with wireless network

ARL Facilities and Capabilities Available to Support Collaborative Research

- Experimental laboratory facilities:
 - Soldier Performance and Equipment Advanced Research (SPEAR) Facility - Biomechanics Laboratory.
 - Tactical Environment Simulation Facility (TESF).
- Unique test sites:
 - Instrumented Obstacle Course and Cross Country Course with wireless network.
 - Shooter Performance Research Facility (M-Range).
- Unique expertise:
 - Biomechanical and Physiological analysis of Soldier performance.
 - Evaluation of Warrior Web prototypes.



Tactical Environment Simulation Facility (TESF) – immersive Environment Simulator (IES)

Complementary Expertise/ Facilities/ Capabilities Sought in Collaboration

- Physical Training and evaluation.
- Training Effectiveness assessment .
- Long-term access to volunteer Soldier or Soldier-like participants.
- Long-term access to emerging physical augmentation technologies.