Physiological Status Monitoring

Caring for the dismounted Warfighter

USARIEM
Warfighter Health & Performance

Natick, Massachusetts

The PSM system enables innovative science for the Warfighter.

PSM is a key "enabling technology" used in current in-theater projects with the Marines, specifically, the Program Manager-Marine Expeditionary Rifle Squad (PM-MERS), and being refined for projects with Program Executive Office-Soldier (PEO-Soldier), Futures.

Comprehensive data sets, including individual characteristics, physiological status, clothing biophysics, load, geolocation, and local meteorology, are collected from groups of Warfighters (10s to 100s) over time periods of days to weeks. The objective: document and model the physiological strain experienced by dismounted Warfighters during realistic field training and in-theater mission.

The intent is to provide PM-MERS, PEO-Soldier and other key decision makers with a quantitative understanding of the thermal-work strain being imposed on Warfighters in theater (metrics).

For example, Marines during hot weather patrols in Iraq are close to their physiological limits. Operations in Afghanistan, where heavy combat loads, semi-encapsulating clothing and armor, rugged terrain, restricted oxygen availability, and thermal extremes are common, are also likely to push Warfighters to their limits.

Quantitative and scientifically sound medical metrics will help PMs and materiel developers make informed and defensible decisions regarding the development and acquisition of new capabilities and doctrine for dismounted Warfighters.

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