Mid Atlantic Regional Chapter
of the
American College of Sports Medicine

Annual Scientific Meeting, November 2nd - 3rd, 2018
Conference Proceedings
International Journal of Exercise Science, Issue 9, Volume 7

Mission Profile Characteristics of a Special Forces Deployment in Afghanistan

William R. Conkright[1], Nicholas D. Barringer[2], James P. McClung[2]. [1]University of Pittsburgh, Pittsburgh, PA, [2]U.S. Army Research Institute of Environmental Medicine, Natick, MA

U.S. Army Special Operations Forces (SOF) undergo difficult missions in extreme environments, oftentimes while carrying heavy loads, the combination of which results in a high energy output. Energy expenditure in excess of intake may result in weight loss and impaired performance. In a scenario where energy demands consistently exceed intake, Soldiers are at increased risk of injury and mission compromise. **PURPOSE:** To determine the energy expenditure of SOF Soldiers based on present-day missions in the Central Command (CENTCOM) region. **METHODS:** Demographics of the participants were as follows: age (yrs) 30±3.5, height (in) 70.65±2.8, weight (lbs) 195.2±24, enlisted (86%), officer (7%), warrant officer (7%), years in the Army 8.3±3.9, and total time deployed during career (yrs) 1.26±1.2. Surveys were collected from 46 SOF Soldiers operating in eight locations in the CENTCOM theater of operations during February 2018. Information from the surveys revealed the mission energy requirements and difficulty of exertion pre-, during-, and post-mission. A physical activity factor was determined based on multiple factors surrounding mission intensity and used to calculate energy expenditure estimations based on a SOF-specific equation developed by Barringer et al., 2018. **RESULTS:** During a six-month deployment, participants underwent a multitude of missions (17.25±8.66). Ninety percent of respondents reported carrying a load 40% heavier than the recommended fighting load (32.9±8.62 vs. 21.8 kg, respectively) based on military doctrine. Average estimated energy expenditure (4848±525 kcal/day) far exceeded the military dietary reference intake of 3400 kcal/day. All but three respondents reported a rate of energy expenditure exceeding the benchmark of 300 kcal/hr necessary to maintain adequate energy reserves upon enemy contact. **CONCLUSION:** The heavy loads carried by SOF Soldiers appear to exceed the recommendations in Army doctrine. Additionally, their high energy expenditure, if not matched by an equally high energy intake, has been shown to result in performance decrements and may compromise mission success. Special attention must be given to pack weights during pre-mission planning and nutrition strategies aimed at meeting mission demands and recovery from strenuous activity.