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C-35 Free Communication/Poster - Nutrition and Diet Assessment: JUNE 2, 2011 7:30 AM - 12:30 PM: ROOM: Hall B

### **Dietary Intake of Army Soldiers in Occupation Specialties Requiring Heavy Physical Demands: 1990: Board #185 June 2 9:00 AM - 10:30 AM**

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*(No relationships reported)*

Training and operational demands of Soldiers have been likened to those of elite athletes, with similar performance and nutrition needs. Dietary recommendations have been developed for the optimal amount of carbohydrate (CHO), protein (PRO), and fat to fuel athletes involved in heavy physical training. The same recommendations may be used as a guide for soldiers with high physical demands to ensure proper nutrition to optimize physical readiness, performance, and health.

**PURPOSE:** To evaluate the dietary intakes of Soldiers with a military occupation specialty (MOS) requiring heavy physical demands.

**METHODS:** A total of 205 Soldiers of the 101st Airborne Division (Air Assault) volunteered (age: 26.5±5.4 years, height: 1.74±0.08 m, weight: 80.7±14.2 kg). All soldiers had a MOS with a physical demands rating (PDR) of moderately heavy to very heavy and completed a 24 hour diet recall. Army Pamphlet 611-21 served as the reference for PDR of specified MOS. Intake was assessed using a dietary analysis software program. Data was reported using median and interquartile range (Q1-Q3).

**RESULTS:** Calorie (CAL), PRO, CHO, and fat intake was 2,433 kcal (1,772.5-3,048.5 kcal), 101g (76-136g), 279g (195.5-378.5g), and 82g (55-112g) respectively. Soldiers consumed 17% (14-21%) of CAL from PRO, 49% (42-58%) of CAL from CHO, and 33% (25.5-38%) of CAL from fat. The amount of PRO consumed per kg of body weight was 1.29 g/kg (0.90-1.69g/kg) and CHO consumed per kg of body weight was 3.6 g/kg (2.55-4.85g/kg). Ninety percent of Soldiers fell below the recommended CHO intake of at least 7g/kg of body weight (recommendation for individuals

engaging in 1-1/2 hours training per day), 87% fell outside the recommended PRO intake of 1.6-1.7g/kg body weight, and 60% consumed >30% of their CAL from fat.

**CONCLUSIONS:** These results indicate that Soldiers in a MOS with heavy physical demands may be sub-optimally fueling to meet nutrition needs. To optimize physical readiness, performance, and health Soldiers need to consume enough CHO and PRO to support training and tactical demands while at the same time reducing fat intake. Future research should examine the best methods to modify eating habits to meet the demands of physical training to optimize health, performance, and physical readiness.

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