DIETARY PROTEIN INTAKE AND PROTEIN SUPPLEMENT USE OF UNITED STATES ARMY SPECIAL OPERATIONS COMMAND OPERATORS

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ABSTRACT

The desire to gain lean muscle mass is a common body composition goal of United States Army Special Operations Command (USASOC) Operators. Sports nutrition guidelines recommend dietary protein intake of 1.2-1.7g/kg/day for resistance-trained athletes. In accordance with the Department of Defense’s Operation Supplement Safety campaign, Dietitian’s advocate Operators take a “food first” approach instead of using dietary supplements. PURPOSE: To assess the number of USASOC Operators taking protein supplements and whether or not protein needs are met through diet alone.

METHODS: A total of 91 USASOC Operators (age: 29.1±6.5yrs, height: 70.5±2.8cm, weight: 81.4±9.7kg, body fat: 15.9±5.3%) completed a 24-hr dietary recall and nutrition history questionnaire. Dietary intake was analyzed using an automated self-administered 24-hour diet recall. RESULTS: Protein intake was 137±59g/day. Protein requirements were met or exceeded through diet alone in 79% of Operators, of these, 42% reported protein supplement use. Dietary protein recommendations were not met in 21% of Operators, of these, 42% indicated taking a protein supplement.

CONCLUSION: The majority of USASOC Operators are consuming adequate dietary protein to promote lean muscle gains with strength-training. Exceeding the recommended range for protein, has not been shown to promote further gains in muscle size/strength, and may lead to undesirable weight gain if caloric needs are surpassed. Consuming protein supplements raises safety concerns, potentially exposing Operators to harmful ingredients in unknown amounts. Nutrition education focused on high quality protein foods properly timed throughout the day may decrease reliance on protein supplements and provide a safer alternative.

INTRODUCTION

• The desire to gain lean muscle mass is a common body composition goal of USASOC Operators (Figure 1.)
• Sports nutrition guidelines recommend dietary protein intake of 1.2-1.7g/kg/day for resistance-trained athletes.
• In accordance with the Department of Defense’s Operation Supplement Safety campaign, Dietitian’s advocate Operators take a “food first” approach as opposed to using dietary supplements.
• The purpose of this study was to assess the number of USASOC Operators taking protein supplements and whether or not protein needs are met through diet alone.

SUBJECTS

• A total of 91 USASOC Operators (age: 29.1±6.5yrs, height: 70.5±2.8cm, weight: 81.4±9.7kg, body fat: 15.9±5.3%) completed a 24-hr dietary recall and nutrition history questionnaire.

EXPERIMENTAL DESIGN AND METHODS

• Body composition test was assessed with air displacement plethysmography (BodPod, Cosmed, Chicago, IL). Body mass (kg) and percent body fat (%BF) were reported as demographic data to describe the population. (Figure 2.)

RESULTS

• Dietary protein recommendations were not met in 21% of Operators, of these 42% indicated taking a protein supplement.
• Mean protein intake of USASOC Operators was 137±59g protein/day.
• Protein requirements were met or exceeded through diet alone in 79% of Operators, of these, 42% reported protein supplement use. (Figure 4.)
• Subjects completed a detailed diet history questionnaire, which included questions pertaining to frequency of meals, meals eaten outside the home, caffeine/alcohol habits, food/fluid intake before, during, and after physical training.
• A survey was administered to evaluate dietary supplement use (frequency, dosage, duration, and administration), reasons for use, as well as adverse reactions, and perceived benefits.

SUMMARY AND CONCLUSIONS

• Findings suggest the majority of USASOC Operators are consuming adequate dietary protein to promote lean muscle gains with strength-training.
• Exceeding the recommended range for protein, has not been shown to promote further gains in muscle size/strength, and may lead to undesirable weight gain if caloric needs are surpassed.
• Consuming protein supplements raise safety concerns, by potentially exposing Operators to harmful ingredients in unknown amounts.
• Nutrition education focused on high quality protein foods properly timed throughout the day may decrease reliance on protein supplements and provide a safer alternative.
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