Select Recent Scientific Publications


United States Army Research Institute of Environmental Medicine

USARIEM is an internationally recognized center of excellence for Warfighter performance science and its useful applications. The institute functions as a world-class laboratory for environmental medicine, physiology, health and nutrition research. It features integrated cellular, tissue, and human research programs.

Military Nutrition Division

Conducts research on nutritional issues affecting the health and fitness of service members, and supports the Surgeon General’s responsibilities as the Department of Defense executive agent for nutrition. Evaluates new rations and examines the interactions between nutrition, performance and the environment.

Primary Research Areas
- Bioenergetics
- Healthy Weight Management
- Combat Ration Testing

Research in Progress
- Efficacy of nutritionally optimized first strike ration for sustaining physical and cognitive performance.
- The effect of amino acid supplementation on skeletal muscle protein turnover following endurance exercise.
- Efficacy of iron supplementation for the maintenance of iron status during basic combat training.
- Impact of dietary zinc on protein synthesis, bone health & immune function.
- Persistence of Lactobacillus reuteri DSM 17938 in the human intestinal tract.
- Sex differences in energy balance regulation.
- Over-the-counter Orlistat for weight loss: efficacy in overweight, active duty soldiers.

Future Objectives & Challenges

Operational Nutrition & Metabolism
- Exercise, Nutrition & Metabolism
- Nutrient requirements for cognitive work
- Satiety & hunger suppression
- Nutritionally enhanced resistance to disease & infection

Healthy Weight Management
- Prevention
- Database tracking at risk & post-treatment personnel
- Risk factors: identifying, screening & modulation
- Weight loss interventions
- Differences in body weight regulation between men and women

Ration Sustainment Testing
- Development of a nutrient database for all field rations