

Event Number:	MRDC003		Service:	Army					
Event Title:	Interaction of aerobic fitness and the hypohydration response during exercise heat stress								
Reporting Organization Name:	Army Medical Research & Development Command								
Beginning Date:	Unknown	Ending Date:	Unknown	Note Field:					
Informed Consent Forms Available:	Unknown	Informed Consent Request:	Unknown	Subject Names Identified:	Unknown				
Number Subjects:		Informed Consent Docs Exist:	Unknown	Gender:	Unknown				
Locations:	<table border="1"> <tr> <td>Army Research Institute of Environmental Medicine (USRIEM)</td> <td>Natick</td> <td>MA</td> <td>USA</td> </tr> </table>					Army Research Institute of Environmental Medicine (USRIEM)	Natick	MA	USA
Army Research Institute of Environmental Medicine (USRIEM)	Natick	MA	USA						

Contract/Project/Protocol Numbers:
Contractor:

Issuing Agency:

Investigators	Subject Type	Race/Ethnicity	Documents
Michael N. Sawka	Unknown	Unknown	Profile Only

Event Abstract:

The inclusive dates for this study conducted at the Army Research Institute of Environmental Medicine at Brooke Army Medical Center in Houston, TX are presently undetermined. This study involved the use of radioactive iodine and/or chromium to estimate plasma volume and/or erythrocyte mass. To date no information is available on the number of study participants or results.

This protocol examined the effects of dehydration on exercise performance in the heat. Exercise-heat experiments were conducted by USARIEM in Natick, MA and Blood Volume measurements with radioactive isotopes were performed by the Naval Blood Research Laboratory at Boston University Medical School. Dates for data collection were from May 1988 to June 1990. Participants were 21 healthy volunteers from the Natick Test Subject Platoon. Red Blood Cell Volume and Plasma Volume (sum equals Blood Volume) were measured once on each subject. For each measurement about 1.5 uCi of ¹²⁵I tagged albumin and about 5 uCi of ⁵¹Cr of tagged Red Cells were infused in a vein using standard procedures. Blood volumes were performed in a clinical setting at Boston University. In addition, these subjects completed a variety of exercise experiments in hot climatic chambers. Results from this study were published in one journal article and combined with data from other protocols for another journal article. Significant findings were that exhaustion from heat strain occurs at a predictable distribution relative to core temperature; that aerobic fitness has no effect, but dehydration reduces the core temperature that can be tolerated.

(DOCUMENTS PERTAINING TO THIS STUDY ATTACHED)

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