

SGRD-UE-ZA

25 August 1992

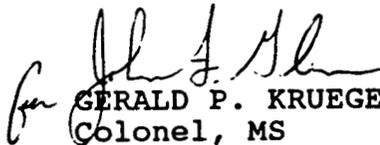
MEMORANDUM THRU Chief, Thermal Physiology Division

FOR CPT S.J. Montain

SUBJECT: Amendment to Approved Protocol

It has been determined that the requested amendment appears to be justified for practical reasons. The revised consent form seems to be in order. Therefore, amendment to protocol, (HURC #400), "Interaction of hydration and metabolic intensity on thermoregulatory responses during exercise-heat stress" is approved on the condition that medical coverage conform to the requirements of the Type Protocol as described in paragraph 4 of Enclosure.

Encl

 LTC, MS
GERALD P. KRUEGER
Colonel, MS
Commanding

CF:
SGRD-HR

MEMORANDUM FOR Commander, USARIEM

SUBJECT: Request for Approval of an Amendment to Approved Protocol "Interaction of hydration and metabolic intensity on thermoregulatory responses during exercise-heat stress" (HURC #400), CPT S. J. Montain, Principal Investigator.

1. Reference Memorandum SGRD-UE-EMT dated 12 August 1992, subject: Request Approval for Addendum to HURC #400
2. The requested amendment provides for:
 - a. Changing the environmental conditions for acclimation from 40°C, 20% rh to 35±3°C, 75±7rh. The reason for this requested change is that because of restrictions on operating the compressor in the Climatic Chambers Building, the engineers do not think that they can maintain the originally specified environment, but do think that they can achieve the new one proposed.
 - b. Changing the test conditions from 35°C, 20% rh to 30°C, 50% rh. The reason for this change is that the metabolic cart to be used during the tests does not function properly in ambient temperatures above 30°C.
 - c. Expanding a pre-testing session in which presently oxygen uptakes at various combinations of treadmill speed and grade are to be measured, to include also practice in or familiarization with other procedures to be used during the experiments.
3. The requested amendment increases the level of heat stress during acclimation above what was proposed in the protocol as previously approved. Therefore, when subjects are undergoing acclimation the medical monitor must be on short-range on-call status (within a 4-5 minute walking distance) in order to conform to the USARIEM Type Protocol.
4. Tables 1A and B in the Type Protocol provide guidance for medical coverage according to estimated tolerable work-rest cycles at various selected combination of environment and exercise intensity. However, the selected environments are spaced at 5°C intervals of ambient temperature and 25% intervals of relative humidity, so to obtain more precise guidance I asked Mr. Stroschein to provide predictions of tolerable work-rest cycles for a metabolic rate of 500W at selected wet bulb temperatures 1°C apart. On the basis of these predictions, I conclude that if wet-bulb temperature exceeds 34°C, then according to the criteria on which the guidance in the Type Protocol is based, the subjects may continue to exercise only if

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a medical monitor is on site.

5. The requested amendment appears to be justified for practical reasons. The revised consent form seems to be in order. I therefore recommend approval on the condition that medical coverage conform to the requirements of the Type Protocol as I have described or interpreted them in paragraph 4, above.



C. BRUCE WENGER, M.D., Ph.D.,
Chairman, USARIEM HURC

CF:
Chair, USARIEM SRC
HURC File
SGRD-HR