

MEMORANDUM

DATE: 6-23-66

TO: K. H. Houghton, W. J. White, A-830

FROM: J. A. Mastropaolo, A-830

SUBJECT: REQUIREMENTS FOR AN ANTICIPATED AIR FORCE CONTRACT ON THE MOL CREW
CONDITIONING STUDY

COPIES TO:

REFERENCE:

Personnel requirements follow:

1. One senior technician needs to be trained on exercise electrocardiography, phonoarteriographic blood pressure, recorder, and data reduction.
2. One senior technician needs to be trained on the Haldane-Henderson gas analyzer, spirometer, and data reduction.
3. One physician is needed to monitor exercise electrocardiograms and measure heart rate during evaluation tests and to man the emergency kit and the defibrillator in case of emergency.
4. The principal investigator should be plainly designated and should have the authority to manage all of the details of the study.

Equipment and supply requirements follow:

1. Two von Döbeln training ergometers need to be purchased.
2. Two Total Body Ergometers need to be purchased.
3. Two phonoarteriographic blood pressure devices need to be purchased.
4. Biode ECG electrodes need to be purchased.
5. Medcraft ECG paste needs to be purchased.
6. One spirometer, 120 liters, needs to be purchased, or borrowed from A3.
7. Two Haldane-Henderson gas analyzers need to be purchased, or borrowed from A3.
8. One recorder, at least 4 channels, permitting ECG and phonoarteriographic blood pressures, is needed for all tests and training sessions.

Facility requirements follow:

The treadmill facility should be modified to permit control of temperature ($22 \pm 0.5^{\circ}\text{C}$) and humidity ($40 \pm 5\% \text{ RH}$). Air in this facility must be $0.03 \pm 0.03\% \text{ CO}_2$ and $20.93 \pm 0.03\% \text{ O}_2$.

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Management requirements follow:

Minimum lead time is estimated at 6 weeks. The study will run 17 weeks.

A meeting with Lt. Col. Ord on 6-21-66 suggests that AMD will decide to execute this study or let a contract within the next 10 days.

J. A. Mastropaolo

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JAM/rt

Attach: "Cardiopulmonary Conditioning by
Total-Body Ergometer" (U)