

JULY 1994

To marry...or not marry a pilot (Clearwater Bay, and Royal Air Force Sek Kong, Hong Kong): "A survey of commercial airline wives compared aircrew with groundcrew families, using a simple self-rating questionnaire. Aircrew wives were found to have slept significantly less well the night before completion of the questionnaire than groundcrew wives (poorer vs. better: 16/41 aircrew, 5/59 groundcrew, $p = 0.02$), although aircrew wives showed no difference in sleep during the preceding week. Aircrew wives had a lower sense of well-being than groundcrew wives (poorer vs. better: 12/45 wives, 6/58 groundcrew, $p = 0.06$), and those less than 40 years of age had a poorer mood (poorer vs. better: 7/21 aircrew, 2/28 groundcrew $p = 0.05$)."⁴

Personality and motion sickness (Israeli Naval Hyperbaric Institute, Haifa, Israel; Technion-Israel Institute of Technology, Haifa; Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel): "Personality factors, as evaluated by the Eysenck Personality Questionnaire, and salivary composition and flow were measured in a group of 29 subjects highly susceptible to seasickness and in a group of 25 non-susceptible subjects. The non-susceptible group had significantly higher psychoticism scores and significantly lower salivary amylase levels compared to the highly susceptible group."²

JULY 1969

Blowing up man (Aeromedical Research Laboratory, Holloman AFB, NM): "Dogs exposed to a vacuum expand markedly due to expansion of trapped gases and evolution of water vapor... Skin elasticity was measured in mongrel dogs, beagles, chimpanzees and men. Using these data and assuming a simple cylindrical shape for the torso, the final volumes of these animals were predicted: 6.5 times the initial volume for mongrels, 3.6 for beagles, 5.6 for chimpanzees, and 3.9 for man."⁵

Space medicine today (NASA Manned Spacecraft Center, Houston, TX): "The major challenge to the discipline of space medicine is a characterization of the nature and degree of the major changes in man's functional capabilities resulting from prolonged exposure to this space-flight environment. Project Mercury proved that man could survive brief exposures to space flight. The Gemini flights investigated man's body systems in more detail and demonstrated changes involving the red blood cell mass, cardiovascular conditioning, bone density, exercise capacity, and muscle nitrogen. None of these changes were limiting and nature had indicated further investigation. The Apollo series has conducted some detailed pre- and postflight evaluations to further define the magnitude of these changes. The Apollo Applications Program will give us the first opportunity to determine why and how some of these changes occur by providing a laboratory in space."¹

JULY 1944

Predicting G-LOC (Laboratory of Physiology, School of Medicine, Tulane University, New Orleans, LA): "The subjects, clad only in

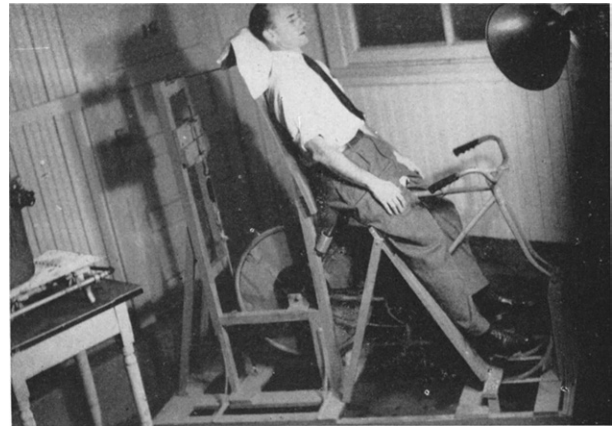


Fig. 1. Modified Martin bicycle ergometer used in the test.

shorts, were usually rested in the horizontal position until pulse-rate and blood-pressure readings were stabilized. They were then instructed to mount a bicycle ergometer to which supports had been added for the back and legs (Fig. 1). These were adjusted so that the subject sat comfortably at an angle of between 60 and 75 degrees... At the end of this period the leg supports were swung out of position and the subject instructed to begin work on the ergometer, pedaling at the rate of 50 revolutions per minute as set by a metronome... The exercise was continued for 10 minutes, at the end of which time the leg supports were quickly swung into place and the subject allowed to relax. Pulse-rate and blood-pressure determinations were resumed as quickly as was possible and continued at one- to two-minute intervals for fifteen minutes except where syncope interrupted the test."³

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