

FEBRUARY 1999

Noisy helos (Aeronautical and Maritime Research Laboratory, Fishermens Bend, Victoria, and Army Aviation Support Group, Oakey, Queensland, Australia): "At-ear noise levels were measured at 4 positions in the cabin of the [Sikorsky S-70A-9] Black Hawk under various flight conditions and at 13 positions outside the Black Hawk under various ground running conditions ... The attenuation properties of the hearing protection devices (HPDs) normally worn by aircrew and maintenance crews ... were also assessed. At-ear sound pressure levels that would be experienced by personnel wearing their normal HPDs were determined at the positions they would normally occupy in and around the aircraft ... Results indicate that HPDs do not provide adequate hearing protection to meet current hearing conservation regulations which allow a permissible noise exposure of 85 dB(A) for an 8-h day."²

Aviation drinking culture (Cranfield University, Cranfield, Bedford, UK): "Under a recent revision of the European Joint Aviation Authorities operations regulations it has been prohibited to act as a crew member of an aircraft with a BAC of greater than 0.02% ... This survey of UK Civil Aviation Authority pilots suggests that over 50% of respondents may have flown an aircraft with a BAC of greater than this prescribed amount ... Professional pilots were found to be heavier drinkers than private pilots and were also more likely to infringe the 0.02% BAC rule ... Analysis of the data using path analysis suggests that professional pilots may be more prone to offending as a result of training in a 'drinking culture' and as a response to commercial pressures in the industry."³

FEBRUARY 1974

Pilot personalities (University of Michigan, Ann Arbor, and Eastern Michigan University, Ypsilanti, MI): "A battery of psychological tests was administered to 170 general aviation male pilots ... Results indicate ... a distinct personality profile for the general aviation pilot which largely lies between the norms established for the U.S. adult males and the U.S. Navy Jet pilots. The two pilot groups were more similar to each other than either one was to the U.S. adult male norms. The personality profile of both pilot groups is characterized by what is popularly conceived as the adventurous, romantic, 'he-man' figure and by what may be described in psychoanalytic terms as the active-masculine personality."⁴

Seat ergonomics (KLM Royal Dutch Air Lines, Amsterdam, the Netherlands): "Is the piloting community ... simply a group of complaining, unfit, unreasonable men, or is there really something in this oft-repeated plea for better ergonomics in crew seat design? Evidence suggests that the incidence of low backpain amongst aircrew is abnormally high and so the question of seat design may be of particular significance. Although progress has been slow there have been some design advances recently and the future now looks more promising. The fact that commercial airlines ... find it necessary to carry out modifications and development work at their own cost on seats already installed in their aircraft, also points to inadequate original design."¹

FEBRUARY 1949

Pilot physical condition (Lockheed Aircraft Corporation, Burbank, CA): "The physical examinations of a group of [120] test pilots ... [were] reviewed ... [A]ll were required to have a CAA [Civil Aeronautics Authority, predecessor of the FAA] Class II license and on this basis were presumed to be physically fit ... Approximately 25 per cent could not have met the physical qualifications required by the airlines. All of them had one or more physical defects which required observation or treatment."⁶

Mass air medevac (USAF School of Aviation Medicine, Randolph Field, TX): "We believe that there should be a definite planned program of air evacuation ... in the event that a future conflict involving the use of atomic weapons ... should become a reality ... There should be three well-defined echelons of air evacuation, graduating from a first echelon light or liaison-type aircraft, carrying from two to four casualties, to a second echelon twin-engine cargo-type aircraft, which can carry up to forty casualties, to third echelon multi-engine aircraft capable of transporting as many as 300 casualties for trans-oceanic or distant overland transfer of such cases."⁵

Motion sickness (Israel Swerling, Ph.D.): "Some five years ago, Lilienthal proposed five categories of factors as operative in the etiology of motion sickness, as follows: 1. Sensory stimulation (vestibular, visual, proprioceptive and interoceptive). 2. Psychosomatic (tension, apprehension and conditioning). 3. General physical fitness (including fatigue states). 4. Type of motion (direction, acceleration and amplitude). 5. Secondary factors (temperature, ventilation, et cetera).

"There appears at present to be no warrant for the rejection of any of these categories, nor for the selection of any one as the cause of motion sickness, nor for sterile dispute concerning the relative significance of any one over the others."⁷

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