

SEPTEMBER 1993

Helicopter blade injuries (U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL): “[A] review of accident records (1972–91) was conducted... During the study period, there were 24 blade strike injuries (12 involving the main rotor), 11 (46%) of which were fatal. Comparison with previous reports indicates a lower rotor blade injury rate in the last decade than in any previous period. The head was injured most frequently (65%), followed by the chest (17%) and abdomen (7%)... Flight crew comprised 49% of the victims, passengers 29%, ground crew 14%, and bystanders 8%.”²

Space to Earth communication (Applied Communications Corporation, Burlingame, CA; Veterans Affairs Medical Center and the University of California, San Francisco, CA): “54 astronauts and cosmonauts returned questionnaires which addressed several aspects of communication between space crews and ground personnel. Two factors were rated as significantly helping this communication: Shared Experience and Excitement of Space Flight. Two additional factors were judged to significantly hinder space-ground communication: Spacecraft Ambient Noise and Space Sickness. Respondents also significantly endorsed the value of contact with loved ones on Earth as having a positive influence on mission performance, particularly cosmonauts and long-duration space travelers. The need for a private space-ground transmission link was mentioned by several respondents.”³

SEPTEMBER 1968

*Salaries in aerospace medicine:*⁵

Table III. Salaries.

	TRAINED IN ASM	CERTIFIED IN ASM
Armed Forces*	\$17,436 (Maj.-Lt. Cdr.-10 yrs. svc.)	\$19,200 (Lt. Col.-Cdr.-14 yrs. Svc.)
NASA*	\$18,000	\$20,000
FAA*	\$17,148	\$18,764
Airlines	\$18,000	\$21,500
Industries	\$18,100	\$21,400

* Military and federal civil service salaries were scheduled for increases in 1968. In addition, military medical officers with over 8 years of active duty and without service commitments will be able to receive annual lump sum “continuation pay” for agreeing to remain on active duty for an additional year.

Carbon dioxide in spacecraft (NASA Langley Research Center, Hampton, VA): “Molecular Sieve is the predominant choice of regenerative carbon dioxide sorber for [space] mission durations not requiring the recovery of oxygen. The desiccant, sieve system lends itself well to intermediate range missions because the system can be adapted to both fuel cell and isotope-powered electrical systems, and several steps of material conservation. It is evident that a heat desorbed desiccant, vacuum desorbed zeolite system design paired with an isotope power system dominates the choice of a regenerative system for intermediate duration missions. However, considerable development work is indicated in order to increase the efficiency of the system operation as concerns the utilization of heat energy developed in the adsorption process. Other regenerative sorbers are considered competitive with Molecular Sieve when oxygen reclamation is assumed.”⁴

SEPTEMBER 1943

Stresses of flight (U.S. Army, Randolph Field, TX): “The rapid technical advance of the science of aeronautics has made it increasingly difficult for the human organism to withstand the stresses and strains to which it is subjected while flying. The various phases of modern aerial warfare have increased the velocities of aircraft in all dimensions over those of other years. High altitude fighting taxes to the utmost the mechanism which compensates for the low oxygen tension of those altitudes even with the use of oxygen. Night fighting, observation, and bombardment make knowledge of night vision a valuable asset. The greater range of the modern transport and bomber sometimes makes fatigue and boredom of paramount importance”⁶.

Divergence of civil aviation medicine (Civil Aeronautics Administration): “In military selection the aviator is either immediately accepted or immediately rejected. In the latter event he is of no further concern to the flight surgeon; the latter’s further duties relate to the accepted group only – check examinations and pilot maintenance.

“In the field of civil aviation quite the reverse seems to be true. Applicants who present no disqualifying defects are by virtue of that fact given appropriate medical clearance and are, so long as a satisfactory physical status is maintained, of no particular concern to the Medical Division. Those persons, on the other hand, who for any reason fail to meet the required standards but may still be competent to engage safely in aeronautical activities of various types, are of special interest to the Medical Division of the Civil Aeronautics Administration. The determination of the ‘relative factor of Safety’ of the individual persons comprising this group appears to be the future field of civil aviation medicine. Stated briefly, civil aviation medicine begins where military aviation medicine leaves off.”¹

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This column is prepared each month by Walter Dalitsch III, M.D., M.P.H. Most of the articles mentioned here were printed over the years in the official journal of the Aerospace Medical Association. These and other articles are available for download from Mira LibrarySmart via <https://submissions.mirasmart.com/asmaarchive/Login.aspx>.

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