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Gender differences in parachuting injuries (U.S. Army Research Institute for Environmental Medicine, Natick, MA; Social Sectors Development Strategies, Inc., Natick, MA; U.S. Army Center for Health Promotion and Preventive Medicine, Aberdeen Proving Grounds, MD): “While military parachuting injuries have been well studied, the relationship between gender and risk of injury has not. Injuries among women may be different due to anatomic and physiologic differences, or due to exposure to different jump conditions. Training methods and equipment developed for men may not be as effective in preventing injuries among women... This descriptive retrospective study used 10 yr of parachute injury data reported to the U.S. Army Safety Center at Fort Rucker, AL, and exposure data obtained from the Defense Manpower Data Center, Monterey, CA... Women appear to jump under less hazardous conditions (jump more often than men in daylight and in static-line, non-tactical environments), yet appear to be at greater risk of serious injury, particularly lower extremity fractures. Injured male parachutists are more likely to experience upper extremity injury. Women’s injuries are more likely to be the result of an improper parachute landing fall or parachute malfunction, while men are more likely to be injured due to ground hazards... There are some provocative gender differences in patterns of injury. Further research is indicated starting with a comprehensive, prospective study, controlling for physical fitness and exposure differences, as well as for potential reporting bias, in order to better understand the apparent differences in reported injuries.”²

NOVEMBER 1972

Mishaps among waived aviators (Air Force Inspection and Safety Center, Norton AFB, CA): “During past years thousands of United States Air Force (USAF) airmen have been granted medical waivers for a great variety of conditions in order that they could continue flying. Although these waivers have been granted with reasonable assurance that flying safety has not been compromised, there may still be an element of doubt in some cases. In order to eliminate this doubt (or possibly to confirm it) the author reviewed the final reports of all USAF aircraft accidents/incidents which occurred during the period 1 January 1962-31 December 1970 in which the pilot or navigator was flying with a medical waiver... Only 33 such cases were identified in which the pilot or navigator was flying with a waiver for an ophthalmologic (17), neurologic (8), cardiopulmonary (5) psychiatric (2) or otolaryngologic (1) disorder which could have been a contributing cause. Perhaps this is an indication that the USAF waiver policy through the years has been prudent and consistent with flying safety.”⁴

Pulling G and the EKG (USAF School of Aerospace Medicine, Brooks AFB, TX): “Electrocardiograms were recorded during 45-sec. exposures to +6.5 to +9.0 G_z of 14 human subjects on the USAF School of Aerospace Medicine human centrifuge. Maximum heart rate (HR) reached by each subject ranged from 155 to 205 beats/min. Four subjects developed a slowing of HR at 16 to 38 seconds into the run due to slowing of the sinus pacemaker, sometimes the escape of an A-V junctional or ventricular pacemaker. Similar escape rhythms also occurred during the sinus slowing with deceleration. Ventricular premature beats (VPBs) occurred frequently in

7 subjects, occasionally in 6, and not at all in one. When frequent, the number increased markedly in the latter part of the 45-sec. runs. These VPBs were frequently multiform and occasionally occurred in runs of 2 or 3 with a few runs of 4 to 7. In no case did any serious arrhythmia persist after deceleration, nor did G tolerance appear to be affected. The etiology and significance of these arrhythmias remain unclear.”⁵

NOVEMBER 1947

Air evacuation success record (Chief, Air Evacuation Department, School of Aviation Medicine, Randolph Field, TX): “The pioneer advocates of air transportation of casualties in the various Air Forces, United States and foreign, visualized the rapid, safe, and logistically economical transportation of war casualties by airplane. The development of air evacuation of casualties has necessarily been dependent on the growth of modern aviation and an opportunity such as afforded by the recent war to prove its feasibility. The judgment of the pioneers in air evacuation has been vindicated by its highly successful operation in World War II.

“Air evacuation today is supported by military authorities because of its logistic and strategic advantages. Medical personnel endorse and favor it since it provides casualties with comfortable transportation to definitive medical care in the shortest possible time. In addition, it is of great value in stimulating morale, and consequently hastening the recovery of the sick, injured and wounded.”³

Preparation for ejection (Aero Medical Laboratory, Wright Field, Dayton, OH): “In service use, it is evident that a thorough indoctrination should be given all pilots of aircraft equipped with ejection seats so that they may become conditioned to the sequence of events prior to ejection and appreciate the necessity of assuming the proper body position. This indoctrination should consist of a demonstration of the equipment, movies of actual live ejections, such as the two made in August, 1946, at Wright Field, and an ejection on the 100-foot ejection seat test tower.”¹

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