

MARCH 1995

PTSD in flight attendants (Department of Psychology, Institute of Psychiatry, London, England): "Six cabin crew attendants who survived an airplane crash in which 47 passengers were killed were assessed for posttraumatic stress disorder and other psychological problems. Each was interviewed 8 months after the crash and completed questionnaires measuring intrusive thoughts, avoidance, depressed mood, anxiety, and fear. Questionnaires were repeated 10 months later. All six met DSM-III-R criteria for post-traumatic stress disorder, reported a wide range of symptoms, and developed a fear of flying 8 months after the crash. Depression scores were normal 18 months after the crash, but all other measures remained unchanged, showing a continued high level of traumatic stress. Results point to the potential for crash survivors to develop chronic psychological problems. The highest levels of distress were reported by the three most senior members of staff with the most responsibility on board, who had also suffered the most severe physical injury..."

"Despite the small number, the present study confirms the very high risk that surviving crewmembers have of developing severe psychological stress after an air crash. The special features of air disasters (sudden, unexpected, induced feelings of helplessness and ineffectiveness, severe injury, feelings of terror, fatalities) probably contribute to this enhanced vulnerability when compared to many other types of disaster. The need is not only to provide appropriate help at an early stage after such an event, but also for pre-accident training."³

MARCH 1970

Decompression protection (Aerospace and Systems Group, North American Rockwell Corporation, Downey, CA, USA): "The rationale for personnel protection against accidental decompression in transport aircraft that will be operating in the 1970 decade is reviewed. Data pertinent to manned and simian tests that were conducted in conjunction with the B-70 program is presented in context with a review of the literature dealing with the effects of rapid decompression to altitudes of 45,000 feet and above. The results of these findings indicate a need for additional protection for flights in this region and questions the use of oxygen masks for contingencies above 35,000 feet... A recommendation is made to provide flight stations with a capsule which would rapidly achieve a ground level oxygen equivalent upon decompression warning and be equipped for flydown to an altitude where demand oxygen equipment can safely be utilized."²

Pilot scan patterns (U.S. Army Aeromedical Research Unit at Fort Rucker, AL, USA): "Eye movements in both the horizontal as well as vertical plane and eye blinks were recorded in 13 skilled and 13 unskilled pilots while flying the UH-1D helicopter during a cross-country flight of approximately 50 minutes duration. Saccadic eye movements in both the horizontal and vertical plane were evaluated. The results demonstrate that skilled pilots engage in significantly more visual search activity in the horizontal plane than is true of novice pilots. Both skilled and unskilled pilots demonstrate changes in visual search activity as a function of time on task. These changes include: a decrease of searching in the

horizontal plane; a decrease in searching in the vertical plane; an increase in the amount of time not engaged in search activity per unit time; and a decrease in blink rate. These results are interpreted as suggesting a decrease in visual search activity as a function of time-on-task."⁴

MARCH 1945

Hyperventilation in flying (U.S. Army European Theater of Operations): "Because we have been looking for cases exhibiting the Hyperventilation Syndrome for the past year we have seen them. Many cases have been questionable because anoxia, upper respiratory infection, athletic injuries, and possibly bends, have been definite factors and yet by careful history and examination the role that hyperventilation might play was something which must be considered..."

"Officers have been more commonly affected than enlisted men by the proportions of about two to one... Another point is that the stocky, muscular type of individual has complained of the more severe muscular cramps. Also when the weather has been very humid the syndrome has been more prone to occur..."

"Fear, anxiety, and nervousness are one cause of the hyperventilation syndrome."

"Unconsciously, hyperventilation for a period of forty minutes can raise the CO₂ combining power above normal. It readily returns to normal."

"Urine tends to go towards the alkaline side."

"Moderate hyperventilating over a period of hours may cause severe cramps of voluntary muscle."

"Occasional vomiting of the benign type may change to the malignant type under severe stress."

"The hyperventilation syndrome should be listed in the Army diagnosis of illnesses."

"Testing prospective flyers and instructions about the syndrome should be part of the flyer's medical examination and training."¹

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