

JANUARY 1999

FALANT accuracy (City University, London, UK, and University of New South Wales, Kensington, NSW, Australia): "The Farnsworth Lantern (Falant) is an occupational color vision test intended to identify people with significant red-green color deficiency who are unable to name aviation, marine or railway signal lights correctly. The colors shown are white, green and red selected to be within protan and deutan isochromatic zones ... 270 color deficiency subjects (diagnosed with the Neitz anomaloscope) were examined. A subset of 108 subjects also completed the Farnsworth D15 and the Farnsworth Munsell 100 hue test ... People with severe red-green color deficiency fail the Falant, but neither the type nor the severity of color deficiency can be determined either from the qualitative results or from the error score."¹

AEDs for aircraft (FAA, Oklahoma City, OK): "In November of 1996, the FDA approved a compact automatic external defibrillator (AED) for treating cardiac arrest on airline flights. American Airlines announced shortly afterward that they would be using this new device, and, by June of 1997, they were placing AEDs on their transcontinental flights ...

"For those airlines that choose to install them, current units seem to provide a reasonable addition to in-flight medical care. Learning about their experiences over the next few years will provide valuable insight about cardiac emergencies onboard aircraft and the role of AEDs in treating them. The future of airline passenger care clearly has the potential to be very stimulating."⁶

JANUARY 1974

Abnormal sinuses (USAF School of Aerospace Medicine, Brooks AFB, TX): "In 1963-64, Fascenelli et al. established that a routine Water's view on asymptomatic individuals will reveal a significant percentage (25%) of abnormal findings, usually in the maxillary sinus. From June 1967 to March 1973, a similar study was carried out to corroborate their findings, particularly the incidence and usual course of cystic lesions in flyers and nonflyers. In the study group of 1,284 asymptomatic flyers there were 200 abnormalities for an incidence of 15.6%; in the control group of 200 non-flyers there were 44 abnormal findings for an incidence of 22%. The maxillary sinus was the site in all but eight individuals and the retention cyst was the most common abnormality in both groups. Acute maxillary sinusitis was the next most common finding."²

Abnormal brains (USAF School of Aerospace Medicine, Brooks AFB, TX): "The significance of abnormal electroencephalographic findings in asymptomatic individuals is not well defined. The USAF School of Aerospace Medicine

has undertaken a followup study of 30 candidates for special aerospace missions, who were found to have abnormal EEG findings, during the period 1961-1965. Interest was generated by the report of an overt seizure disorder in one individual. The survey has disclosed the occurrence of two (probably three) fatal aircraft accidents, one fatal automobile accident, two nonfatal aircraft accidents, and three aircraft incidents, involving members of the group. Implications with regard to physical standards for aircrew members are discussed."³

JANUARY 1949

Aviation sunglasses (Dr. Matthews, San Antonio, TX): "The sun's effect on the eye is exerted in the three zones of radiation: ultraviolet, infrared, and visible. Of these the ultraviolet may be disregarded, for any filter selected for flying sun glasses effectively protects the eye against that fraction. Infrared, or heat, radiation produces transient irritation of the eye; its reduction by absorptive filters is desirable. Brightness in the field of vision requires greatest attention in the selection of protective filters. Neutral filters produce a minimum of color distortion in subjects with anomalous or borderline color vision, and are preferred over lenses of green or amber color. The addition of top-graded metallic films to the filter offers certain advantages."⁵

Aircrew selection (RCAF Institute of Aviation Medicine, Toronto, Ontario): "While considerable study is being given to new tests and new procedures which may be useful in the selection of aircrew, it also has seemed worthwhile to look back and to reappraise the selection methods that were used during wartime. At that time the tests had to be validated against a training school criterion. Now they can be tested against the achievement these aircrew attained in operations and in their air force careers. Reasonably complete and comprehensive selection, medical, training and operational records are being gathered on a sample of 3,000 wartime aircrew. These records will be analyzed and the relative value of all procedures which had a bearing on the selection of aircrew will be determined ...

"The aim is to develop, during peacetime, effective selection procedures which, during a time of emergency, can be used on a wide scale to secure aircrew who can be trained easily and who will perform air and ground duties efficiently."⁴

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.miracd.com/asmaarchive/Login.aspx>.

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