

**MAY 1994**

*Risk of coronary artery disease (Armstrong Laboratory, Brooks AFB, TX):* "Completion of cardiovascular evaluations of 387 members marked the end of 40 years of follow-up in the West Point Study. Coronary artery disease (CAD) caused 4 cases of sudden death, 14 cases of myocardial infarction (MI), 13 cases of angina, and 17 cases of silent CAD. Using risk factors (serum cholesterol, estimated HDL-cholesterol, systolic blood pressure, and smoking status) measured before age 28, we derived a multivariate regression formula for predicting which members of the study, had they been pilots, would have been grounded for CAD before age 55... We conclude that it is possible to select pilot candidates with the lowest risk for CAD."<sup>2</sup>

*Pilot personalities (Armstrong Laboratory, Brooks AFB, TX):* "The present research was designed to examine the relationship between personality and combat performance using the 'Big Five' model of personality and a multi-component model of pilot combat performance. A sample of 100 USAF pilots rated the importance of 60 traits for effective performance on performance dimensions such as flying skills and crew management. The results indicated that pilots from different aircraft agreed that the personality trait of Conscientiousness was the most important determinant of performance on all performance dimensions."<sup>5</sup>

**MAY 1969**

*Old pilots (FAA, Washington, DC, and Johns Hopkins University, Baltimore, MD):* "General aviation pilots in the United States may continue flying as pilot-in-command so long as they hold a valid medical certificate. There is no upper age limit for general aviation pilots. Airline pilots are required to retire from air carrier flying at age sixty... During the time covered by this paper, the oldest active pilot was a ninety-three-year-old physician.

"The number of persons over sixty holding valid medical certificates is increasing each year. Between August 1965 and December 1965, the number jumped from 7,401 to 11,317...

"An analysis of the accident record of older general aviation pilots (over sixty) for 1965 reveals that this age group has an accident record essentially comparable, and in some cases superior, to that of the younger pilot group. Especially for the private pilot group, age and accidents were not significantly related."<sup>4</sup>

*Pilot - and flight surgeon - personalities (Naval Aerospace Medical Institute, Pensacola, FL):* "[T]he Edwards Personal Preference Schedule (EPPS) was administered to 288 Navy jet pilots who were entering advanced operational training... The sample group was found to be significantly different on almost all scales from both the Edwards' General Adult Male and College Male norms...

"The EPPS has been given to 5 consecutive classes of student flight surgeons, and the results closely resemble the pilot group, with several fairly clearcut exceptions. The student flight surgeons tend to score higher than the jet pilots on Nurturance and lower on Dominance... Compared to the general adult male, the jet naval aviator expresses greater manifest needs in the areas of Heterosexuality, Dominance, Change, Achievement, and Exhibition, while expressing lower manifest needs in the areas of Nurturance, Abasement, Deference, Order and Succorance. It still remains to be demonstrated, however, that these differences have any practical usefulness within the aviation community."<sup>3</sup>

**MAY 1944**

*Altitude training (Air Surgeon's Office, Army Air Forces, Washington, DC):* "In many instances, Flight Surgeons have been placed on temporary duty with Altitude Training Units in order to further their knowledge of the physiological aspects of flying and to improve their acquaintanceship with oxygen equipment.

"Personnel of the Altitude Training Units have acquainted themselves firsthand with the problems of aviation by engaging in flight themselves. In some instances, their appreciation for and their solution of the problems of various organizations have led to requests that they be attached to these organizations when they proceed overseas.

"The Altitude Training Program in the Army Air Forces represents a tremendous program of applied physiology; a program aimed to provide the airman with a 'design for living' in the air; a program which attempts to bridge the gap between the aviator and his airplane in order to realize the maximal possibilities of both."<sup>6</sup>

*Human factors classification (Aviation Safety Board, Naval Air Training Center, Pensacola, FL):* "The concept of 'Pilot Error' has been confused from the beginning by various attempts to subdivide it into some meaningfulness...

"In 1930 the National Advisory Committee for Aeronautics prepared a very complete classification of causes of aircraft accidents. In addition to enumerating in great detail the many varieties of structural and power-plant failure, the classification subdivided 'pilot error' into five major subcategories: (1) poor technique, (2) error of judgment, (3) carelessness, (4) disobedience of orders, and (5) miscellaneous... In 1935 the classification was refined and amplified by the Committee into a neat block of ramifications, and as late as 1944 was being widely used by those responsible for reporting accidents to government agencies. The classification as used at present involves, in addition to the five major causes listed above, the following underlying causes: [1] lack of experience and 2) physical and psychological]"<sup>1</sup>

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