

FEBRUARY 1997

Head movement and motion sickness (University of Southampton, Southampton, England): "During constant speed rotation of the body, head rotation about an axis other than the axis of rotation of the body (i.e., Coriolis stimulation) induces motion sickness... There was no significant difference between illness 0.75 m from the center of rotation and illness at the center of rotation... Moving the head up from the horizontal caused significantly fewer increases in ratings of motion illness than moving the head back down to the horizontal... Precise location of the body at the center of rotation is not critical during Coriolis stimulation, but the direction of head movement has a large effect on nausea."⁵

Detecting DCS microbubbles (KRUG Life Sciences; NASA-Johnson Space Center, Houston, TX): "Doppler-detectable microbubbles (DMB) are frequently used to evaluate altitude decompression stress. However, the role of DMB in the therapy of decompression sickness (DCS) has not been examined... The Doppler test was useful for both screening and confirming DCS, when different criteria (grade I for screening; grade IV for confirming) were used for a positive test... The Doppler test was of greater utility in excluding DCS than confirming its presence, and was useful in making therapeutic decisions on DCS when confronted with non-specific symptoms at altitude."³

FEBRUARY 1972

United States and Russia to share space data (Aerospace Medical News): "The details of the recently approved agreement are contained in recommendations of a joint working group on space biology and medicine which met in Moscow Oct. 9-13, pursuant to the agreement of Jan. 21, 1971 between NASA and the Academy of Sciences of the USSR on space cooperation.

"The Joint Working Group began an examination of selected biomedical data and the results of manned flight programs and exchanged reports on the Soyuz and Apollo programs. Special consideration was focused on the following aspects of the biomedical results of manned flight: the cardiovascular system, metabolism, water-electrolyte exchange, statokinetic apparatus, performance, vestibular apparatus and biological research...

"[T]he working group recommended that meetings be held at least once a year... Directly related research will also be discussed when it is pertinent."¹

Pharmaceutical sleep induction (United Air Lines, Inc., Stapleton International Airfield, Denver, CO): "The use of hypnotic drugs for sleep inducement has in general been avoided in the practice of aviation medicine. The caution has been based on the possible next day effects of the drug on flight safety and performance.

"The double-blind study design was to evaluate objectively and subjectively any performance decrement in a flight task after two nights of hypnotic drug induced sleep... Thirty pilots performed 300 [simulated] ILS instrument approaches...

"The objective flight recorder data indicate no significant decrement in flight performance greater than the placebo effect itself. Subjectively, flurazepam was superior to glutethimide, particularly in the 'hangover' effect."²

FEBRUARY 1947

Predicting pilot error (AAF School of Aviation Medicine, Randolph Field, TX; AAF Flying Safety Service, Langley Field, VA): "Human failure in airplane operation has repeatedly been identified as the most common factor in the production of an aircraft accident. 'Pilot error' is a complex of reactions as diverse as willful violations, acts of carelessness, defective judgment, or poor technique...

"An understanding of 'pilot error' can logically be aided by reference to what is now known of accidents common to other phases of human activity. It has been shown by numerous clinical studies that certain individuals, fortunately a minority of the population, are basically 'accident-prone.' They are often characterized by tendencies to impetuosity in thought and action, irritability, and antagonism to authority...

"Success in the objective measurement of personality trends such as these has been elusive. One recently developed method, the M.M.P.I. (Minnesota Multiphasic Personality Inventory), has proved moderately serviceable...

"[As] a tool in the identification among rated pilots of those who are prone to 'pilot error' aircraft accidents, the Minnesota Multiphasic Personality Inventory is of negligible value."⁴

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