

Medical News

Executive Director's Column

Rayman

FAA and AME Issues

Over the past several years there has been an unprecedented amount of activity in the FAA regarding issues of particular interest to aviation medical examiners. The following is a synopsis of those issues:

a. An updated Part 67 on Medical Certification was published by the FAA introducing a number of new changes in physical standards for all classes of airmen. Thus far the updated Part 67 has been favorably received.

b. A new Guide for AMEs was published and distributed by the FAA reflecting the changes in the updated Part 67.

c. The FAA passed a ruling that would allow selected airmen with insulin dependent diabetes mellitus to fly with a special issuance. However, there are a number of provisos including testing of blood sugar pre-flight and in-flight. Also, the special issuances would be restricted to general aviation (Class III) certification. This was a very controversial issue with passionate opinions on both sides of the argument. However, the FAA has made its decision. Undoubtedly, those airmen with special issuances will be closely followed.

d. The FAA promulgated a new Final Rule pertaining to allowable carbon dioxide concentration in transport category airplane cabins. Heretofore, the maximum allowable concentration was 30,000 PPM or 3%. It has now been reduced to 5,000 PPM or 0.5%. This action is in response to a recommendation from the National Academy of Sciences to review the CO₂ limit in airplane cabins and provides a cabin CO₂ concentration level representative of that recommended by some authorities for buildings. It should be noted that in studies of cabin air quality, U.S. air carriers CO₂ levels average about 1,500 PPM which is well below the new standard.

e. The issue of the contents of in-flight emergency medical kits and automatic external defibrillators is under review. AsMA is now surveying 43 airlines and will make the information received available to the FAA.

f. There is a joint NIOSH-FAA task force examining cabin air quality and disease transmission in-flight. Reproductive sequelae of female flight attendants will be followed as well as radiation exposure.

g. A computer-based method of instruc-

tion for AMEs is being developed at CAMI. It is envisioned that this will decrease the frequency requirement for attendance at AME seminars (possibly from 3 to every 6 years.)

h. Recreational pilot medical self-certification (under Part 61) is under review by the FAA. As of yet, no decision has been made.

i. The FAA has reaffirmed the Age-60 Rule.

j. There has been a voluntary turnoff of laser lights near some airports. An overall DOT policy is being explored.

k. Flight duty-rest requirements continue to be under review.

l. The DOT IG is reviewing procedures for special issuances.

m. ATC physical standards are being reviewed.

n. Active research on child restraint systems being conducted at CAMI.

o. The DOT has been discouraging the practice of disinsection as a routine procedure.

It would take considerable space to describe all of the details for each of the above items. Suffice it to say that your Aerospace Medical Association, through its committee structure, has taken an active role in representing our views to the FAA and other concerned agencies. I can also say to you, with unconcealed pride in AsMA, that the FAA, on a number of occasions, has called us soliciting our opinion. Don't hesitate to call me if you would like further information on these or any other issues.

New AsMA HIV Policy

In 1991, ^{AsMA}AsMA published its HIV policy based upon a well referenced position paper recommending that all HIV positive, asymptomatic aviators across all classes be disqualified for flying. Several years later, based on new information in the literature, the Aerospace Human Factors Committee was tasked to prepare another position paper that would review current knowledge and, if indicated, provide another recommendation regarding the suitability for flying duties of aviators who test HIV positive, but who reveal no other symptoms of AIDS. The paper was prepared, reviewed, and approved by the Committee and forwarded to Council, which voted at the November 20, 1996 Council Meeting, to adopt recommendations of the Committee as follows:

Pilots who are HIV seropositive, but asymptomatic and otherwise healthy, should undergo periodic neuropsychological testing. If there is no evidence of cognitive impairments in the initial test, the pilot could be issued a special medical certification requiring additional neuropsychological tests at semiannual intervals. As long as subsequent tests show no changes from initial values, the pilot could continue to be eligible to fly under the special certificate. Should subsequent neuropsychological tests

show cognitive impairment or a significant decrement in performance from initial values, the pilot should be medically disqualified from flying duties and the special certificate withdrawn.

This new policy, which represents a reversal of our 1991 policy, came after considerable discussion and debate over the past several years. It is certainly a very controversial issue and one in which a good argument could be made for either side. Our new policy, therefore, as revised, will be published accordingly.

NASA Harvest of Mir Space Wheat Marks First for U.S. and Russia

U.S. astronaut and AsMA member John Blaha harvested the first crop of healthy plants grown through a complete life cycle in the microgravity of space aboard the Russian space station Mir, according to NASA scientists.

Called "Project Greenhouse," the 32 plants, a super-dwarf wheat variety involved in this experiment, are part of a joint cooperative initiative with NASA; Utah State University, Logan, UT; the Institute of Biomedical Problems Research Center in Moscow; and the Space Research Institute of the Bulgarian Academy of Sciences in Sofia. Unlike previous short-term experiments, these plants were allowed to develop at a normal growth rate and appear to have matured fully to produce the desired seed-containing heads, project scientists report.

"Harvest of this wheat on Mir represents the first time that an important agricultural crop and primary candidate for a future plant-based life support system has successfully completed an entire life cycle in the space environment," said Dr. David Bubenheim, project co-investigator at NASA's Ames Research Center, Mountain View, CA.

"The development of plant-based, regenerative life support systems is critical to sustaining a crew during long-duration missions such as Mars exploration," he continued. "Successful growth of the wheat crop through all developmental phases, culminating in the harvest of seeds, demonstrates that the environment of space poses no obstacles to the biological components of a regenerative life support system. This information is critical for the future application of these systems to recycle wastes and provide a crew with water, air and food. This, in turn, makes the crew self-sufficient, thereby enabling the practical and economical exploration of space," Bubenheim concluded.

The plants were grown in "Greenhouse" Svet, a small growth chamber originally built in Bulgaria during the late 1980s according to (see WHEAT, p. xxx)