Serious medical incapacitation of a flight crew member occurs infrequently. Still, ASRS receives reports from pilots who have been adversely affected by illness, medication, food (or its lack), blood donations, hypoxia, and other causes. What follows is a sampling of some of the most interesting and educational reports recently received by ASRS.

Subtle vs. Profound Incapacitation

A textbook example of subtle incapacitation, noticed but not clearly defined by either the ill Captain or his concerned First Officer, is the subject of the next report:

When the flight attendant came in, I was still wrestling with the Captain. The Captain suddenly went limp, but with his leg still pushing on the rudder. A doctor sitting in First Class came up to the controls. The Captain gave me a shaking hand and...pushing on the rudder and leaning on the yoke. I quickly started to counter his inputs as the autopilot disconnected.

The incapacitation was very subtle. The Captain was no longer deciding on or out of a complete normal state periodically. It was natural to "help" with the flying when he was not lucid. I wish that we had a sudden and complete incapacitation, as this would have been easier to recognize and deal with.

Kudos to this First Officer for keeping a calm and cooperative atmosphere on the flight deck during this episode. The Captain was later diagnosed with a serious systemic infection. The incapacitation was very subtle, with the Captain going into an unrecognizable. I took control of the aircraft, and advised the Captain that I would fly the remainder of the flight. The Captain agreed, however, his actions indicated that he wanted to participate. Not wanting to create a confrontational atmosphere, I asked the Captain to get the ATIS and the approach plates. These tasks became too difficult for the Captain to accomplish. An uneventful landing was accomplished.

The incapacitation hazard involving prescribed medication. Our reporter concludes, "A pilot should always seek the advice and expertise of an A.M.E. before taking any medication of any kind." One excellent reason is that Aviation Medical Examiners have a list of medications that are prohibited by the FAA. The reporter attributes naiveté about the tranquilizer to inexperience with all types of medication.

The cause of the incapacitation was a violent seizure which required further medical treatment. This type of incident is fortunately rare, and the flight crew and cabin medical personnel were well prepared to deal with it. The crew might have found it easier to help the Captain if seatbelt extensions had been available, which can be used to secure persons and large objects.

The First Officer added that all his previous training had discussed only subtle incapacitation, in which the crew member would "fade away," but not become violent. As a result of the First Officer's experience, his air carrier will be addressing violent incapacitation in future training sessions.

An Unnerving Experience

A commuter First Officer reporting to ASRS described an incapacitation hazard involving prescribed medication. Our reporter had received a physical exam from a doctor who was not an Aviation Medical Examiner. During the exam, the doctor prescribed a tranquilizer. The reporter continues:

I inquired if this medication would affect my flying performance or my job. [The doctor's] opinion was that it would not affect either. Based on what I thought was his "expert" opinion, I agreed to take the medication. I flew for approximately 1 - 1/2 months while taking the medication. In his report, the doctor prescribed a tranquilizer. The reporter concludes, "A pilot should always seek the advice and expertise of an A.M.E. before taking any medication of any kind." One excellent reason is that Aviation Medical Examiners have a list of medications that are prohibited by the FAA. The reporter attributes naiveté about the tranquilizer to inexperience with all types of medication.

ASRS Recently Issued Alerts On...

- An arrival/departure conflict over Seoul, Korea
- Fire warning and autoland malfunctions on two A-320s
- Target correlation problems with two ATC radar systems
- Collapse of a Boeing 767-300ER landing gear during taxi
- Non-uniform depiction of speed restrictions on SID charts

A Monthly Safety Bulletin from The Office of the NASA Aviation Safety Reporting System, P.O. Box 189, Moffett Field, CA 94035-0189

September 1995 Report Intake

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From NASA's Aviation Safety Reporting System
Bird strikes are a common occurrence at this time of the year, due to heavy migratory activity. In our first report, a general aviation pilot belatedly figured out how to “duck” bird strikes:

- Entering downwind...in a nose-high attitude to slow for gear extension. At 800 feet AGL, a flock of about 20 ducks came into view, rising. I started evasive action. The flock scattered and we impacted multiple ducks. One duck shattered the windscreen and ended up in the back seat. Headsets were knocked off, eliminating communication. Added power to maintain airspeed...gear extension on final, no flaps...landed without incident. No injuries.

Due to nose-high altitude I had no view of the ducks rising from below me. Loss of communication was very unsettling. When the windscreen came out, [there was a] major airspeed loss. It would have been very easy to stall at 800 feet AGL. Even more power was needed when the gear was extended.

As a partial remedy, the reporter suggests slowing gradually and keeping the nose low to improve visibility. Turning landing lights on during final approach may also help birds see and avoid aircraft.

Another pilot, reporting an equally damaging bird strike, observed tongue-in-cheek that there is only one way to prevent such incidents: “Enact federal regulation requiring all birds to be equipped with transponders and TCAS.”

(check the VOR coordinates and they were correct. Upon switching to the [VOR] radio, we realized that we were left of course. Center told us that, if we continued on our course, we were going to pass west of the VOR by about 13 miles, instead of passing over it. Center then gave us “direct [intersection].” We used the FMS to go direct and checked the coordinates in the FMS, which were correct. Then, the aircraft turned too far to the left. We went back to the radio and intercepted the XYZ arrival. We checked the FMS again, and it indicated that we were 7 miles right of course. [With help from Center], we continued inbound and landed. We asked the Flight Attendants if anyone in the cabin was using some type of electronic equipment. They said that there were several people playing electronic games.

The navigation errors could have been caused by the portable electronic devices in the passenger cabin, or by a malfunction or calibration error in the FMS. Normal operating procedure is to verify FMS information with any other operational systems, such as VOR or DME.

(Almost) Lost at Sea

A widebody crew, relying solely on dual Omega Navigation Systems for overwater navigation, encountered repeated errors in the system. The Second Officer reports:

- The #1 Omega went into and out of ambiguity mode several times during the flight. The difference in distance [reading] between the two units was 4 miles or less. Approximately one hour out of our destination, both Omegas went into ambiguity and diverged to a greater degree, approximately 10 miles apart. We asked Center for a radar ident...and were approximately 10-15 miles from our indicated position. Center then gave us vectors and the flight landed normally. At the ramp, the Omegas were found to be 15 and 14 miles off, respectively. Reliability has been virtually 100% during the Spring, Summer and Fall. However, during the Winter, [these] instances have been common.

In this instance, the Omega unreliability was apparently caused by wintertime sunspot activity that created polar disturbances. These disturbances can affect the Omega Very Low Frequency (VLF) propagation.

To Our Readers

Because of severe production delays related to the recent government furlough, the November and December CALLBACKs are being combined into this single issue (#198). Regular monthly production is expected to resume in January 1996 with issue #199.