



# Federal Air Surgeon's Medical Bulletin



Vol. 44, No. 1  
2006-1

**Aviation Safety Through Aerospace Medicine**  
For FAA Aviation Medical Examiners, Office of Aerospace Medicine Personnel,  
Flight Standards Inspectors, and Other Aviation Professionals.

U.S. Department of Transportation  
**Federal Aviation Administration**

## HEADS UP →

2. **Editorial:**
3. **Certification Update:**
  - Vision Correction
  - AASI Changes
  - More Q & A
5. **New AME Resources:**
  - **Laser Eye Surgery Brochure**
  - **Technical Report: Guidance for Medical Screening of Commercial Aerospace Passengers**
5. **Quick Fix: Airman Address Problem**
6. **Get More CME for Your Money at AsMA**
7. **LETTERS**
8. **Case Report: Myasthenia Gravis**
9. **Profile of a CAMI Manager**
10. **Case Report: Peripheral Vascular Disease**
12. **Index of Articles Published in 2005**



## Dr. Tilton Selected as Federal Air Surgeon

*At press time for the last issue of the Bulletin, we very briefly reported that Dr. Fred Tilton had been selected as the new Federal Air Surgeon. Now here is the rest of the story, excerpted from the Federal Aviation Administration's February 14 announcement about Dr. Tilton's selection.*

—Ed.

**T**HE ADMINISTRATOR of the U.S. Department of Transportation's Federal Aviation Administration (FAA), **Marion C. Blakey**, today announced that **Frederick E. Tilton**, MD, MPH, has been selected to be the new Federal



Air Surgeon. Dr. Tilton has served as Deputy Federal Air Surgeon for the past six years and replaces **Jon L. Jordan**, MD, JD, who retired last month.

As the FAA's Federal Air Surgeon, Dr. Tilton oversees the Office of Aerospace Medicine's workforce of more than 400

physicians, research scientists, nurses, program analysts, and legal instrument examiners, including the prestigious Civil Aerospace Medical Institute (CAMI). He also oversees the nearly 5,000 private physicians who administer FAA medical exams as designated

medical examiners.

His primary areas of responsibility include the medical certification of airmen, inspection of industry drug and alcohol testing programs, medical clearance of air traffic control specialists,

*Continued on page 4*

## New Version of AME Guide Coming Soon

By Kelly Spinner

**I**N APRIL 2006, the Office of Aerospace Medicine will introduce Version V of the *Guide for Aviation Medical Examiners* (Guide). It is accessible via the Internet at: [www.faa.gov/other\\_visit/aviation\\_industry/designees\\_delegations/e\\_ame\\_guide/](http://www.faa.gov/other_visit/aviation_industry/designees_delegations/e_ame_guide/)

Note: Remember to update your Guide's shortcut and/or bookmark with Version V.

Significant items that deserve special attention are:

### Introduction of a Search Engine

- We installed a search engine for immediate retrieval of medical information and guidance specific to the Guide.

### Introduction of new Aviation Medical Examiner- Assisted Special Issuances (AASIs)

- We included new AASIs for applicants with a history of melanoma and testicular cancer that is applicable for **ALL** classes.

- We are also pleased to introduce a new AASI subsection applicable for **third-class applicants only**. These particular medical conditions are initially disqualifying and must be deferred to the Aerospace Medical Certification Division or Regional Flight Surgeon. Following the grant of an Authorization for Special Issuance of a Medical Certificate by the

*Continued on page 4*

## When in doubt...

...CALL THE STAFF at the Aerospace Medical Certification Division (AMCD) or your regional flight surgeon.

I realize that is an unusual way to start my first editorial as the Federal Air Surgeon, but I wanted to give you an idea about the way I think right from the beginning. I will get back to that in a moment.

When I interviewed to become **Jon Jordan's** deputy more than six years ago, one of the first questions he asked me was, "Would you be interested in my job some day?"

My answer was, "In my opinion, the Federal Air Surgeon (FAS) has the premier civilian aerospace medicine job in the United States, and it would be a very great honor to be the FAS some day."

He then asked if I thought I was prepared to step into the position immediately if he decided to retire. I told

### The Federal Air Surgeon's Column



By Fred Tilton, MD

him that I probably could because there had been other times in my career where I had been successful after being appointed to a vacant position. I went on to say that if given the choice; however, I would prefer to have the opportunity to watch him and learn.

Fortunately for me and you, Jon did not decide to retire immediately, and I had six years to observe a consummate professional at work. That may seem like a long time to some, but the time has just flown by. The Office of Aerospace Medicine is responsible for a variety of aviation safety programs; development of aerospace medical policies and standards; medical certification of airmen; medical clearance of air traffic control specialists; oversight of aviation industry drug abatement programs; Federal Aviation Administration (FAA) employee drug and alcohol testing; FAA employee occupational health; aerospace medical education; designation, training, and oversight of aviation medical examiners (AMEs); and aerospace medicine and human factors research. I will write editorials focused on each of these areas in future issues of the *Bulletin*. My intent here is only to say I had a lot to learn, and that Jon was, and continues to be, a great mentor and friend.

It helped that I had a fair amount of experience in aviation and aerospace medicine [see lead article, page 1], so Jon did not have to spend much time on the basics. However, my knowledge of the FAA and the Office of Aerospace Medicine was limited, so Jon spent a great deal of time explaining "the FAA business." He had also made excellent personnel decisions, leaving me, the Office of Aerospace Medicine, the

FAA, and you with a highly professional and talented cadre of people who are dedicated to public service. Thanks again, Jon!!!

Now, back to my opening comment. Shortly after I joined the FAA, I attended a basic AME seminar in Oklahoma City. One of the first things new AMEs were told was when in doubt, defer. That was the right message at the time. The capabilities of the electronic medical certification system (DIWS) were fairly limited, and most of the responsibility for medical certification was in the hands of **Warren Silberman** in his role as the manager of the AMCD.

There was no way that Warren and his limited staff could immediately respond to all of the questions from AMEs regarding certification decisions. Since it was very difficult for AMEs to gain direct access to Warren, the safe alternative was to defer. While deferral helped to support safe decision making, it also contributed to a large queue of cases awaiting decisions and, consequently, a long wait for some airmen to receive notification regarding FAA certification decisions on their cases.

DIWS has now been enhanced, and staff at our regional offices are participating fully in airman certification. As a result, we can respond much faster. So, AMEs, when you are debating with yourself about a questionable case, do not automatically defer. Pick up the phone and call the AMCD or your regional flight surgeon. It is very likely that you will be able to get an immediate answer to your question and be able to issue the airman a certificate on the spot. This will allow us to provide better service to our customers and also help to minimize the AMCD queue.

We have already seen the benefits of this enhanced system—we have been able to keep our average special issuance decision-processing time to less than 30 days for several months. The next DIWS enhancement, MedXPress, will add the capability to allow airmen to submit their applications electronically. You will hear a lot more about MedXPress in the coming months.

I will close by saying that it is an honor to be appointed your Federal Air Surgeon. When you see me at a seminar or any other event, please take the opportunity to introduce yourself. I look forward to meeting as many of you as I can and to working with you in the future. →

### Federal Air Surgeon's Medical Bulletin

Library of Congress ISSN 1545-1518

#### Secretary of Transportation

Norman Y. Mineta

#### FAA Administrator

Marion C. Blakey

#### Federal Air Surgeon

Fred E. Tilton, MD, MPH

#### Editor

Michael E. Wayda

*The Federal Air Surgeon's Medical Bulletin is published quarterly for aviation medical examiners and others interested in aviation safety and aviation medicine. The Bulletin is prepared by the FAA's Civil Aerospace Medical Institute, with policy guidance and support from the Office of Aerospace Medicine. An Internet on-line version of the Bulletin is available at: [www.faa.gov/library/reports/medical/fasmb/](http://www.faa.gov/library/reports/medical/fasmb/)*

*Authors may submit articles and photos for publication in the Bulletin directly to:*

Editor, FASMB  
FAA Civil Aerospace Medical Institute  
AAM-400  
P.O. Box 25082  
Oklahoma City, OK 73125  
e-mail: [Mike.Wayda@faa.gov](mailto:Mike.Wayda@faa.gov)



**Certification Update**  
Information  
About Current Issues

By Warren S. Silberman, DO, MPH

**Vision Correction**

**YOU MAY HAVE HEARD** that we have approved several new procedures since our last *Bulletin* update. We are now accepting conductive keratoplasty, a procedure for treating presbyopia and for monovision (contact lenses that adjust one eye for farsightedness and the other for nearsightedness, used as an alternative to bifocal lenses) correction of presbyopia. The ophthalmologist uses radio frequency waves at specific positions about the cornea, thus elevating the mid-cornea.

The problem is that there can be a slow loss of effect so that each year there is a quarter-diopter reduction in hyperopia. For this reason, the FAA requires a period of stability—the airman must be grounded for 6 months

after the procedure—and we will follow the airman with FAA eye exams (FAA Form 8500-7).

We are now also allowing bifocal external contact lenses and intraocular lenses. This also includes the *Crystalens* and other accommodating lenses. The applicant must be at least 3 months post-operative for cataracts and have one-month adaptation for the multifocal lens. The airman must still meet the visual acuity standards in each eye.

I refer you to the on-line *Guide for Aviation Medical Examiners* to get all the details on the requirements for medical certification for these ophthalmologic procedures.

**AASI Changes**

We have added some more AME-Assisted Authorization for Special Issuance (AASI) medical conditions to the 24 we already have on record. They include: mechanical and bioprosthetic (tissue) valve replacements, myocardial infarction, angina pectoris, and coronary artery disease treated with percutaneous transluminal angioplasty, stent, atherectomy, brachytherapy, rotablation, and bypass grafting. All of these cardiac-related AASIs will be for **third-class** medical certification **only**.

We (Regional Medical Offices or Aerospace Medical Certification Division) will continue to perform the initial medical certification for the condition or evaluate the next recertification testing before granting this capability. Please note that if the airman requires testing that is unusual for the condition, we will maintain the review here at AMCD and not grant an AASI. We will include, as an enclosure in the authorization packet, the specification sheet that lists what we require from the airman and which situations the AME is to defer decision-making to the FAA. Be on the lookout in the on-line Guide for the protocols so you can have a “cheat sheet” posted in your office for quick review.

We also just added an AASI for *testicular cancer*. The specifications will be much the same as for the recently approved renal and breast cancer protocols. The testicular cancer AASI is for **all** classes of medical certification.

Let’s flesh this out with 2 case presentations that will test your knowledge of the certification protocol for applicants with head injuries.

**Certification Issues and Answers**

**BILLY BOB SMITH**, a 45-year-old entrepreneur, P-51 Mustang pilot, and avid motorcyclist had one not-so-smart habit—to ride his motorcycle without wearing a helmet.

One day, he was riding his cycle home from a meeting with his accountant when his cycle slammed into a four-by-four that had sped through a stop sign. Billy Bob was thrown from his bike and struck his head on the pavement. Luckily, the impact was not severe, but by all accounts he was unconscious for 2 hours. A CT scan of his head did not reveal any blood whatsoever. The CT scan was even repeated the next day and still did not demonstrate any abnormalities. His only posttraumatic amnesia was for the actual incident. He

did have quite a bit of road burn and a nasty laceration of his lower lip that required some plastic repair. There were no posttraumatic seizures.

Three months later, he reported his accident to his AME while applying for his certification renewal. While Billy Bob may have been dumb for not wearing a helmet, he brought all the supporting documentation: the emergency room and ambulance reports, history, physical examination, discharge summary, and CT scan reports. He even obtained a status report from his treating physician.

If you were Billy Bob’s AME, how would you proceed with his medical certification application?

**Answer:** I hope you would defer the medical certification or even phone the regional office or AMCD. The FAA categorizes such a closed-head injury as *moderate*. This means that the airman had loss of consciousness or alteration of consciousness for more than one hour but less than 24. Cognitive testing and neurologic evaluations should not have revealed any deficits and there must not have been any seizures. The requirement is that the airman be deferred, and we require a 6-month post-event observation period. After the 6-months have elapsed, the airman would need to provide a detailed and current neurological status report and would possibly require neuropsychological testing.

*Continued on page 4*

*Dr. Silberman manages the Aerospace Medical Certification Division at the Civil Aerospace Medical Institute.*

---

## Certification from page 3

---

**2** **MANNY MOE SHICKELGRUBER**, a 55-year-old auto repair salesman, was at home on vacation performing some overdue “honey-do’s.” While working in his garage, the phone rang. He was expecting a call from his 90-year-old mother who was sick at home. Rushing to respond, he tripped over his tool box, fell, and struck his head on the cement floor. He was discovered by his wife about 4 hours later and taken by ambulance to the local tertiary care hospital. A CT scan of his head revealed fractures of the right orbital floor, zygomatic bone, and left greater wing of the sphenoid bone. He also had a contusion of the left cerebral hemisphere and subarachnoid bleed. Manny was unconscious for 25 hours and had posttraumatic amnesia for about 3 more days. No surgery was performed. A repeat CT scan one month later showed resolution of the blood. He resumed his normal activities, and a neurological examination was negative.

Mr. Shickelgruber was a flight instructor as well and went to his AME for an examination about 4 months after his accident. He was truthful and disclosed the closed-head injury and the events surrounding the incident. His AME thought that since he was now “normal,” he could issue a medical certificate for full second-class privileges.

*Should the AME have issued a second-class medical certificate?*



---

## AME Guide from page 1

---

AMCD or RFS, these AASIs permit an Examiner to reissue a third-class airman medical certificate, provided the applicant meets disease/condition certification criteria and is otherwise qualified.

### Introduction of New Aerospace Medical Dispositions

New evaluation data and aerospace medical dispositions are provided for intraocular devices, bladder cancer,

**Answer:** The AME should not have issued any medical certificate! Even though the injury did not appear to be significant, the airman was unconscious for over 24 hours. He also had skull fractures and intracranial bleeding. The FAA defines this type of event as a *severe closed head injury*. The airman had loss of consciousness and/or alteration of consciousness for over 4 days. He also had orbital fractures and a skull fracture.

Another quite important issue is that he had a brain contusion and subarachnoid bleeding. He was lucky in his recovery, but that does not take away from the severity of the injuries. The FAA defines *severe head injury* as one with LOC or AOC greater than 24 hours. This alone requires a 2-year minimum period of grounding. Any head injury, regardless of severity, in which there is evidence of intracranial bleeding—such as subdural or epidural hematoma, subarachnoid hemorrhage, or even a contusion—requires a *minimum* of a 2-year grounding.

This AME should have obtained emergency room and ambulance reports, history, physical examination, and CT scan reports. This would have revealed the severity of the injuries, so the AME should have deferred the decision for medical certification. The concern here is the increased risk for seizures for 5 years after the injury.



breast cancer, melanoma, and renal carcinoma.

We appreciate your kind comments and support for the *Guide* and encourage your continued feedback.



*Ms. Spinner is a program analyst in the Office of Aerospace Medicine's headquarters office.*

---

## DR. TILTON from page 1

---

drug and alcohol testing of FAA employees, aerospace medical and human factors research, and aerospace medical education.

“Fred’s high-caliber leadership experience and expertise in the aviation and medical fields make him ideally suited to be our nation’s Federal Air Surgeon,” said Blakey.

Prior to joining the FAA in 1999, Dr. Tilton was the corporate medical director for The Boeing Company in Seattle. Under his leadership, his department received the American College of Occupational Medicine’s prestigious Corporate Health Achievement Award as one of the best industrial medicine programs in the nation. From 1988 to 1991, Dr. Tilton was the regional medical director at Boeing’s Wichita, Kan., facility.

During a 26-year career with the U.S. Air Force, Dr. Tilton logged 4,000 hours as a command pilot/senior flight surgeon in trainers, transports, reconnaissance aircraft, and fighters. He flew a wide variety of aircraft, including the F-15, T-38, RB-57F, C-141, and the B-47. He spent 11 years in the medical corps where he commanded a clinic, was an F-15 physician-pilot and technical consultant, and held key positions such as Chief of Flight Medicine in the Surgeon General’s Office. He retired from the Air Force in 1988 with the rank of colonel.

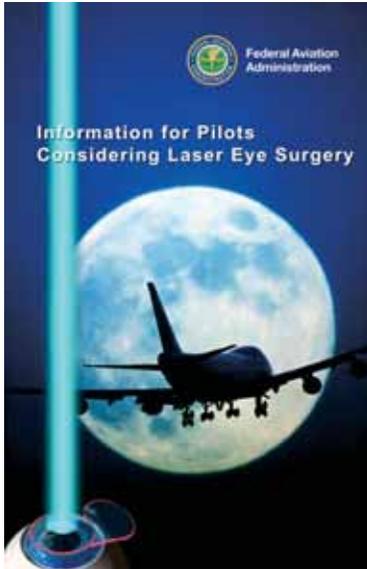
A graduate of the U.S. Military Academy, Dr. Tilton received both an MS and a MD degree from the University of New Mexico and an MPH from the University of Texas.

He is board-certified by the American Board of Preventive Medicine in both Aerospace and Occupational Medicine. He is a Fellow of Aerospace Medical Association and the American College of Preventive Medicine.



## New Pilot Safety Brochure Available

*Benefits, Risks of Laser Eye Surgery Illustrated*



**M**ORE THAN HALF of the civilian pilots in the United States must utilize some form of refractive correction to meet the vision requirements for medical certification. While spectacles are the most common choice for aviators, recent studies show a growing number of pilots opting for refractive surgical procedures, which include laser refractive surgery.

A new pilot safety brochure describes the benefits as well as possible pitfalls that laser refractive surgery offers to those considering these procedures. *Information for Pilots Considering Laser Eye Surgery* was written by Civil Aerospace Medical Institute researchers Van Nakagawara, OD, Kathryn Wood, CPOT, and Ron Montgomery, BS.

Three copies of the 12-page informational brochure are being sent to all aviation medical examiners to help answer questions that pilot applicants may ask about the feasibility of obtaining laser refractive eye surgery. Additional copies of the brochure are available:

- online: [www.faa.gov/pilots/safety/pilotsafetybrochures/](http://www.faa.gov/pilots/safety/pilotsafetybrochures/)
- Phone: (405) 954-4831 →

## New Aerospace Standards Guide Published

*Civilian Spaceflight on Horizon*

By Mike Wayda

**C**OMMERCIAL SPACE operations intended to carry paying passengers briefly into space are about to become reality. One day soon, someone might ask you to provide a flight physical for a trip to outer space. Will you think it's a joke being perpetrated by some smart-alecky sport pilot? If he insists, will you know what kind of physical examination to provide? Will you know the correct forms to use and how to process the paperwork?

The Federal Aviation Administration has not yet, and may never, establish requirements for commercial space passengers, but a Civil Aerospace Medical Institute technical report that has just been published can act as guidance for you and your staff if a potential passenger requests medical clearance. Because you need to be aware of this, you may want to familiarize yourself with the contents of this publication to be prepared for the eventual rush to outer space exploration by passengers and crewmembers.

The Office of Aerospace Medicine has recently published general guidance for operators of manned commercial aerospace flight about the medical assessment of prospective passengers. Entitled *Guidance for Medical Screening of Commercial Aerospace Passengers*, the nine-page report was designed to identify individuals who have medical conditions that may result in an inflight medical emergency or inflight death, or may compromise in any other way the health and safety of crewmembers and passengers aboard a commercial aerospace vehicle.

Space flight exposes individuals to an environment that is far more hazardous than what is experienced by passengers who fly on airline aircraft. With orbital and suborbital flights coming in the

near future, pre-existing medical conditions can be aggravated by exposure to environmental and operational stressors such as acceleration, microgravity, and solar/cosmic radiation.

The publication, an Office of Aerospace Medicine technical report, is co-authored by Dr. **Melchor J. Antuñaño** (Director, Civil Aerospace Medical Institute) and a baker's dozen of other experts in the field of aerospace medicine. To read *Guidance for Medical Screening of Commercial Aerospace Passengers*, access it on the Internet at:

[www.faa.gov/library/reports/medical/oamtechreports/2000s/2006/](http://www.faa.gov/library/reports/medical/oamtechreports/2000s/2006/)



## QUICK FIX

*Airman Addresses Must Be Correct on Applications for Medical Certificates*

By Richard 'Dick' Jones, MD

**PROBLEM:** A significant problem has been detected relating to the addresses recorded on FAA Form 8500-8's not always being the airman's current address. This problem apparently arises when an address from an old examination is used, instead of a new address reported on an application when an airman has moved since the last examination.

**RESULT:** If the airman's address is not accurate, it becomes problematic for the Aerospace Medical Certification Division to correspond with the applicant when additional information is needed. Letters are often returned as undeliverable or significant delays are encountered before the airman receives the letter and can respond to the request. Needless to say, the airman becomes angry with everyone involved.

**SOLUTION:** Only the information on the current application for a medical certificate should be transcribed onto the transmitted examination. Do not rely on previous examinations to obtain current demographic information.



*Dr. Jones manages the Civil Aerospace Medical Institute's Aerospace Medical Education Division.*

## Getting More CME for Your Money at AsMA

*Make the most of your options at the annual AsMA meeting*

By Richard 'Dick' Jones, MD

**T**HE FAA WILL be offering an AME Theme Seminar at the Aerospace Medical Association (AsMA) Annual Scientific Meeting in Orlando, Fla., May 15-18. We have learned from the experience of conducting these seminars at many AsMA meetings that some AMEs have difficulty deciding which meeting fee to select and how to obtain seminar credit versus Continuing Medical Education (CME) credit. I will try to clarify all of your options.

I first want to make it clear that the registration fee you pay goes entirely to AsMA, even if you elect the FAA-AME Seminar rate. This money covers the expenses AsMA incurs in organizing the meeting, paying for our meeting space, and audio-visual support. *None of the money is given to the FAA!*

The theme of this seminar will be Cardiology, which is accredited for 19 Category-1 hours by the ACCME, 17.5 hours by the American Academy of Family Practice, and 19 category 1-B hours by the American Osteopathic Association. We will grant CME credit on an hour-per-hour basis for each of our sessions you attend, but you **MUST** complete the FAA's official course document to verify attendance.

If you desire credit for attendance at an AME Theme Seminar to satisfy our refresher training requirement, you will need to either:

- Attend the entire seminar, or
- Attend selected lectures considered "core," and supplement the core hours with enough AsMA lecture hours to total 19 hours of Aerospace Medicine-related topics (this will give you the equivalent of an entire seminar).

*Dr. Jones manages the Aerospace Medical Education Division at the Civil Aerospace Medical Institute*

**IMPORTANT: YOU MUST BE PRESENT AT THE FIRST FAA SEMINAR SESSION (10:00 A.M. MONDAY) TO REGISTER FOR THE SEMINAR AND TO RECEIVE COURSE DOCUMENTS IF YOU WISH TO BE GIVEN CREDIT BY THE FAA FOR ATTENDING A SEMINAR!!!**

Meeting participants who will attend only FAA seminar lectures are entitled to the FAA-AME Seminar rate of \$240; any AME electing this rate is entitled to listen to AsMA presentations of interest, but remember, you must attend our core lectures to receive credit for seminar attendance, and you will not get CME credit for any AsMA sessions attended for this rate. Anyone planning to supplement FAA hours with AsMA hours for CME credit will need to pay the appropriate AsMA member (\$370) or non-member (\$470) fee that includes CME, and you will need

to complete AsMA CME paperwork. The FAA cannot give you CME credit for FAA seminar lectures you did not attend or for AsMA presentations you did attend. Note, there is another category of fees, largely applicable to international attendees—for those who do not need or want CME credit (\$245 for members of AsMA and \$330 for non-members).

As in the past, we have scheduled our seminar in such a way as to permit our AMEs to participate in other meeting activities, such as poster sessions, exhibits, and luncheon meetings. We hope you choose this seminar to fulfill your requirement for refresher training. The AsMA meetings are a wonderful alternative to obtaining AME Theme Seminar credit at the usual FAA venues.



### Aviation Medical Examiner Seminar Schedule

2006		
May 15 - 18	Orlando, Fla. (AsMA)	Cardio (3)
June 12 - 16	Oklahoma City, Okla.	Basic (1)
July 14 - 16	Albuquerque, N.M.	N/NP/P (2)
August 4 - 6	Washington, D.C.	AP/HF (2)
September 11 - 15	Oklahoma City, Okla.	Basic (1)
September 22 - 24	Atlanta, Ga.	OOE (2)
December 11 - 15	Oklahoma City, Okla.	Basic (1)

#### CODES

AP/HF Aviation Physiology/Human Factors Theme

CAR Cardiology Theme

OOE Ophthalmology - Otolaryngology - Endocrinology Theme

N/NP/P Neurology/Neuro-Psychology/Psychiatry Theme

(1) A 4½-day basic AME seminar focused on preparing physicians to be designated as aviation medical examiners. Call your regional flight surgeon.

(2) A 2½-day theme AME seminar consisting of 12 hours of aviation medical examiner-specific subjects plus 8 hours of subjects related to a designated theme. Registration must be made through the Oklahoma City AME Programs staff, (405) 954-4830, or -4258.

(3) A 3½-day theme AME seminar held in conjunction with the Aerospace Medical Association (AsMA). Registration must be made through AsMA at (703) 739-2240. A registration fee will be charged by AsMA to cover their overhead costs. Registrants have full access to the AsMA meeting. CME credit for the FAA seminar is free.

The Civil Aerospace Medical Institute is accredited by the Accreditation Council for Continuing Medical Education to sponsor continuing medical education for physicians.

**CONGRATULATIONS**

Dear Editor:

I want to congratulate Mr. Doug Burnett on his winning [CAMI] Employee of the Year. It is well deserved. The week I spent in Oklahoma, he was extremely helpful with my problems and questions. I hope he is there to help us medical examiners for many years.

**David Rosenberg, MD**  
Haverstraw, NY

**CONTACT INFORMATION**

Dear Editor:

I have contacted the AME staff [in the Aerospace Medical Education Division] and was told that I was eligible for a computer update as an alternate to attending a seminar in person. I was transferred to a computer update person . . . Is there another contact number, preferably



E-mail, for getting the Web site for the computer upgrade for AME?

I would think E-mail would be more efficient use of time than phone for many services and requests and an email address would be included with most phone listings in the *Medical Bulletin*.

**Charles Severs, MD**  
Louisville, Ky.

Dear Dr. Severs:

These were last provided in the winter 2003 issue (Vol. 41, No. 4, p. 8), but new AMEs should know how to contact the appropriate training staff members who can help with their training needs. In the table below are the names, areas of responsibility, and contact information for Aerospace Medical Education Division staff:

NAME	TITLE/ RESPONSIBILITIES	E-MAIL ADDRESS	PHONE (405)
Deanie Davis	AME Program Assistant: AME records	Deanie.Davis@faa.gov	954-4257
Gail Gentry	Supply Clerk: distribution of all FAA AME forms and brochures	Gail.Gentry@faa.gov	954-4831
Sharon Holcomb	Training Assistant: all Distance Education (MCSPT, CAPAME, & MAMERC) for AMEs	Sharon.Holcomb@faa.gov	954-4829
Denise Patterson	Training Assistant: Basic AME Seminars Theme AME Seminars	Denise.Patterson@faa.gov	954-4830
Bobby Ridge	Program Analyst for the International and Military/ Federal Region	Bobby.Ridge@faa.gov	954-4832
Ridge Smith	Education software issues	Ridge.Smith@faa.gov	954-4379
Doug Burnett	AME Program Manager Backup of all above	Doug.Burnett@faa.gov	954-6214

**HEART STATISTICS**

Dear Editor:

I work in the Aerospace Medicine office at the Navy Bureau of Medicine and Surgery in Washington, DC. We have a Navy flight officer requesting a waiver for flight duties. He has a history of MI, and is about 1½ years post single-vessel CABG of his LAD artery. We found the table on page 11 [FASMB, vol. 43-4] very interesting in view of the current request for waiver. Is there any way to tell how many of the pilots with a 1<sup>st</sup>- or 2<sup>nd</sup>-class license and history of MI and had only a single CABG procedure?

Our officer also has a 30% stenosis of another artery. Would that have any bearing on granting waiver for an FAA license?

**Jim Black,**  
Washington, D.C.

Dear Dr. Black:

I cannot separate out from our data the number of bypassed vessels. All 1<sup>st</sup>- and 2<sup>nd</sup>-class airmen cases are reviewed by a panel of from one up to five cardiology consultants. We surely have granted issuance to cases that you mention. The FAA does not have a maximal percentage of vessel obstruction in its thought processes in granting medical certification to such individuals.

**Warren Silberman, DO, MPH**  
Manager, Aerospace Medical Certification Division

*You are encouraged to take advantage of this forum to discuss important issues pertaining to airman medical certification. Let us hear from you.*

Contact:  
FAA Civil Aerospace Medical Institute  
P.O. Box 25082, AAM-400  
Editor, FASMB  
Oklahoma City, OK 73125  
E-mail: Mike.Wayda@faa.gov

# An Airman with Myasthenia Gravis

Case Report, by Dr. Nidal El Rimawi, MD

*This case report describes a 63-year-old airman applying for renewal of his 3<sup>rd</sup>-class medical certificate. The airman has a history of myasthenia gravis under control with medications. Medications include Mestinon (pyridostigmine), Imuran (azathioprine), and prednisone.*

## History and Physical Findings

**T**HIS IS A 63-year-old man in good general health. He had been flying for both business and pleasure for many years when, in 1995, he presented to his aviation medical examiner (AME) with a 12-month history of easy fatigability. He underwent testing and neurological evaluation. The airman was given a diagnosis of myasthenia gravis. He was placed on Mestinon (pyridostigmine) with dramatic resolution of his symptoms. Subsequent neurological evaluations were completely normal. He did not experience any side effects from his medical therapy. He exercised daily with a combination of aerobic conditioning and light weight training.

On his most recent aeromedical evaluation, he reported a history of environmental allergies, a hospitalization after an MVA 26 years ago, and his previously reported myasthenia gravis. His AME found him to be in good general health with a BP of 122/82 and HR of 76. Physical exam was unremarkable. His near vision was reported as 20/50 correctable to 20/25 and distant vision was 20/25 corrected to 20/20. The airman reported using glasses for near vision correction while flying. All other aspects of the physical exam were normal.

A recent neurological evaluation was added to his application. This indicated that he has continued to be symptom-free, despite his diagnosis of myasthenia gravis. He had a normal neurological exam and was reported as being physically active.

*Continued on page 9*

*Dr. Nidal El Rimawi was a resident in aerospace medicine on rotation at the Civil Aerospace Medical Institute when he wrote this report.*

## MYASTHENIA GRAVIS

Myasthenia gravis (MG) has been associated with a decreased number of muscular ACh receptors.<sup>1</sup> These receptors are targeted for destruction by the presence of anti-acetylcholine receptor antibodies (AChR-ab). Both sensitized T cells and B cells are involved. The sensitized T cells are responsible for the key receptor damage. The thymus is also involved in this process and its surgical removal often causes improvement in disease severity.<sup>1</sup> The pathology also involves ACh receptor blockade at the post-synaptic level. This partly explains why acetylcholinesterase inhibitors (and therapies that reduce the amount of ACh-ab) have such a strong, positive effect.

This disorder has an overall prevalence of 1 in 25,000 in the United States. The female to male ratio is 6:4. The overall incidence is 2-5 per million per year.<sup>2</sup> It has bimodal incidence peaks occurring in females in the second and third decades and in men during the fifth and sixth decades. There is some overlap between MG and other autoimmune diseases and scattered case reports of familial occurrence, which suggests a partial genetic predisposition.<sup>1</sup>

Clinically, MG patients present with fatigability and weakness of skeletal muscles. They generally do not have reflex, sensory, or coordination abnormalities. Many cases initially involve ocular muscles. Weakness of other muscles innervated by cranial nerves results in loss of facial expression, everted lips, a smile that resembles a snarl, jaw drop, choking on foods and secretions, and slurred speech. The majority of cases that begin with ocular involvement become generalized over time. Under periods of physical stress, such as infection or surgery, the disease may precipitously worsen. This may cause severe weakness and, rarely, life-threatening failure of the respiratory muscles.<sup>3</sup>

MG can be classified by the Osserman scale: Grade I is ocular disease only, Grade II is generalized weakness of mild (IIa) or moderate (IIb) intensity, Grade III is severe generalized disease, and Grade IV is "myasthenic crisis" with respiratory failure.<sup>1</sup>

A British study conducted in 1995 showed evidence that there was improvement in physical strength with treatment. However, in cases where there was memory impairment, this impairment did not improve with treatment; this was measured by various memory tests and an auditory vigilance test.<sup>4</sup>

A number of disorders may mimic MG, including other disorders of neuromuscular transmission, metabolic or toxic syndromes, and neurogenic weakness. Botulism and Lambert-Eaton myasthenic syndrome (LEMS) can cause both fatigue and ophthalmoplegia.<sup>1</sup> Certain drugs (including penicillamine, curare, aminoglycosides, quinine, procainamide, and calcium channel blockers) may cause similar weakness syndromes or exacerbate MG. Hyperthyroidism or Graves' disease may also mimic or worsen MG, as can cranial nerve abnormalities.

His current medications are Mestion 60mg every 4 hours and 180mg at bedtime, Imuran (azathioprine) 75 mg daily, and prednisone 5mg every other day. He also takes Prilosec (omeprazole) and Claritin (loratadine) as needed. None of these medications were new and had been previously reported for purposes of obtaining a past 3<sup>rd</sup>-class certificate.

#### Evaluation

Evaluation of MG includes time endurance tasks to monitor fatigability, lab tests, and chest X-rays. The lab tests should include thyroid function tests, antithyroid antibodies, ANA, and voltage-gated calcium-channel antibodies. Recently, commercially available immunoprecipitation tests have made detection of ACh-R antibodies in the serum a helpful possibility. Thymoma or thymic hyperplasia should be ruled out by CT scan or MRI of the chest.<sup>1</sup>

#### Treatment

Treatment of MG consists of anticholinesterase inhibitors to inhibit the enzymatic elimination of acetylcholine, thereby increasing its concentration at the post-synaptic membrane. Immunomodulation is usually necessary. Corticosteroids are the principal agents used for immunomodulation. Alternate day dosing is recommended to lessen the side effects and should be tapered to the lowest effective dose. Cytotoxic therapies such as azathioprine are helpful in some cases, as are immunosuppressive agents such as cyclosporine.<sup>1</sup>

Most MG patients lead normal lives, but lifelong immunomodulation is often required.<sup>5</sup>

#### Aeromedical Disposition

This airman has a chronic, dynamic disease process. Although treated adequately for symptoms of weakness, there are still concerns that physical or mental stress may create a flare up, surpassing the medications' capacity to prevent the symptoms. This is why the airmen are always reminded that, under 14 CFR, Part 61.53, they should not knowingly operate an aircraft while a medical condition or medication

*Continued on page 11*

## Profile of a Manager: Steve Smiley

By Lynn McCloud

*'You don't go anywhere unless you support your people.'*

**T**HAT'S THE VOICE of experience speaking. **Steve Smiley**, Manager of the Medical Review and Appeals Branch came to his job at the Civil Aerospace Medical Institute (CAMI) after 30 years in the U.S. Air Force. He was a Chief Master Sergeant and supervised 1,700 employees as the career manager for Aerospace Medical Specialists.

Now, Smiley is five years into his job leading 51 federal employees with one of the highest profile assignments in the FAA — reducing the backlog of processing individual pilot medical certification cases.

High profile, indeed. Every year at EAA AirVenture (more familiarly known as the Oshkosh Air Show) one or more pilots will stand up in the Meet the FAA session and quiz the FAA Administrator, "Why is it taking so long for my medical?" Reducing the backlog of pilot medical certification cases is one of the top objectives in the AVS business plan.

Nearly 5,000 FAA-authorized Aviation Medical Examiners (AMEs) perform up to about 450,000 pilot exams a year. Of those, 95% are clear-cut. The paperwork goes to CAMI and the pilot's medical certificate (first-class, second-class, or third-class) is automatically processed.

But, for the other 5% — cases that might be disqualified due to medical or medication reasons — the AME and/or the treating physician's report is reviewed by one of the legal instrument examiners. Then, based on established protocols, the examiner allows the certification, denies the request, or seeks additional information from the pilot or one of the seven physicians in the Aerospace Medical Certification Division (AMCD).

"The largest reason we deny," Smiley explains, "is for the medications the pilot is taking."



It is detailed, painstaking work that requires focus and accuracy. Smiley sees his role as providing his employees "what they need to do their jobs." Much of what Smiley and CAMI provides is, of course, tools, equipment, and training. Those are givens. But more than those, Smiley says, are the intangibles, which, not surprisingly, center on the FAA core values. Safety, of course, since that's the mission of the branch — making sure pilots are safe to fly — but there's also quality, integrity, and people.

"I need to listen... I need to hear their concerns, whether it's personal or job related."

Smiley sees focusing on people as key to being successful. "I need to listen," Smiley says, "upward to my superiors but, just as importantly, to my employees. I need to hear their concerns, whether it's personal or job-related."

Smiley formalizes communications with quarterly branch meetings, supervisor meetings once a week, and biweekly sessions with supervisors and the branch's four quality assurance staffers. But he also believes in less formal communications, such as an open door policy and making himself visible in the branch. Recognition is important, he adds. That doesn't necessarily mean plaques and certificates. "It's just as valuable to walk around and recognize employees for a good job."

He reads leadership books — *Leadership and the One-Minute Manager* is clearly visible in his office. Yet, Smiley says he learned the most about leadership from "the experience of working for good leaders." Those were the teachers of what he sees as one of the most important lessons for managers: "My success depends on my ability to help others get the best out of themselves."



*Reprinted from winter 2004 issue of Leading Edge.*

# Peripheral Vascular Disease With Vertebrobasilar Insufficiency

Case Report, by Donald Christensen, DO, MPH

The obstruction of any major vessel of the body is considered disqualifying for any pilot classification. However, after successful surgical intervention and correction, an airman may seek certification from the Federal Aviation Administration.

## History

**A** 60-YEAR-OLD male, 2<sup>nd</sup>-class agricultural spray pilot with a history of hypertension, hyperlipidemia, and heavy tobacco use is being considered for a special-issuance medical certificate after a prolonged 2-year recovery period following vascular surgery. Initially, he experienced frequent episodes of dizziness and one-sided vision loss. A diagnostic workup that included color carotid duplex studies revealed significant bilateral carotid atherosclerotic plaque disease.

He subsequently underwent bilateral carotid endarterectomies without sequelae. He remained asymptomatic for approximately 15 months, then he experienced a few transient ischemic attacks, a single syncopal episode, and acute symptoms of a left-sided stroke. His stroke symptoms manifested as left-sided hemiparesis with dysarthria and intermittent global gait disturbances; these symptoms did not improve, despite aggressive thrombolytic therapy. MRA studies revealed 90% stenosis of the left vertebral artery near its origin at the left subclavian artery. The right vertebral artery was also stenotic, but to a much less degree.

A head MRI revealed a small thalamic infarct consistent with his degree of vertebrobasilar vascular disease. He underwent a left vertebral artery transposition to the left internal carotid artery without surgical complications. His post-hospital treatment consisted

of daily aspirin therapy, triple medication regime for hypertension, and single medication and diet control for hyperlipidemia.

Three years have passed since his second vascular surgery. He has regained full use of his extremities through vigorous physical therapy. He reports no further spells of focal transient neurological deficit or syncope. Specifically, he denies symptoms of vision disturbances, difficulty swallowing, focal numbness, weakness, or incoordination. However, he has a residual mild degree of speech slurring that is manifested mainly when fatigued.

Since this airman had significant peripheral vascular disease with surgical intervention, he is ineligible for medical certification under Title 14 of the Code of Federal Regulations Part 67.309 (a) 2 or 3. The aviation medical examiner (AME) should defer the issuance of a medical certificate to the FAA for final disposition (1).

## Aeromedical Considerations

The obstruction of any major vessel of the body is considered disqualifying for any pilot classification. However, after successful surgical intervention and correction, an airman may seek certification from the FAA under Title 14 CFR 67.401, Part 67. The *Guide to Aviation Medical Examiners* recommends that subspecialty consultations in vascular, neurology, and cardiology

*Continued next page* ➤

## Background

Despite significant medical advances, atherosclerotic coronary artery disease and cerebral stroke disease are responsible for more deaths than all other causes combined (2,3). Hemorrhagic and or thrombotic strokes will affect more than 700,000 Americans this year (4,5). Stroke is the third-leading cause of death and the leading cause of long-term disability in the United States (6).

Adverse neurovascular events can manifest as many clinical or global signs and symptoms. Clinical signs usually provide a reference to the offending portion of the involved arterial system. The neurovascular system can be described as a communicating network between the internal carotid and vertebral arteries. The carotid arterial system perfuses the eye and the anterior and middle portions of the cerebrum. The vertebrobasilar arterial system perfuses the medulla, pons, midbrain, thalamus, cerebellum, and the occipital cortex (7). The two systems are anastomosed by the Circle of Willis. The two posterior communicating arteries and the anterior communicating artery actually make up the circle.

Normally, an occlusion in any vascular structure results in a disastrous outcome. That is not the case with an occlusion in vessels that make up the Circle of Willis. An occluded vessel among the vertebrobasilar circulation is not an uncommon finding in the elderly population. It does not create a significant problem when the contralateral vertebral artery is patent. This situation does not call for an urgent need for heparin or thrombolytics, as the Circle of Willis collateral circulation has compensated for the loss of the one vertebral artery. Surgical intervention for an occluded vertebral artery (anywhere along its path) is only considered when there are neurological symptoms present, and there is significant occlusive disease present in the "other" vertebral artery. The most common surgical approach is a transposition of the involved vertebral artery directly into the ipsilateral internal carotid artery, thereby re-routing blood flow around the stenotic vertebral occlusion (8).

*Lt. Col. (Dr.) Christensen is a resident in aerospace medicine at the USAF School of Aerospace Medicine, Brooks City Base, Texas. He wrote this article while on rotation at the Civil Aerospace Medical Institute.*

## Vascular from page 10

be submitted for special issuance consideration for those with atherosclerotic vascular disease with evidence of circulatory obstruction and history of acute vision loss with TIA and syncope with unilateral paralysis. In situations such as this, not only does the airman need to show successful recovery from vascular surgery but also provide evidence that there are no neurological deficits or signs of other cardiovascular disease, especially of the coronary arteries. Therefore, for all classes, submission to the FAA will include bilateral carotid ultrasounds, 2-D echocardiogram, 24-hour Holter monitor, and brain MRI. Any prior arteriogram may be submitted but is not required. A graded exercise tolerance test is also indicated, given the high probability of coronary artery disease in the presence of cerebro-vascular disease. In light of this individual having a cerebral vascular event, the AME should provide the FAA with a brief description of the airman's functional capabilities. Specifically, comments

on any degree of impairment as measured by strength, range of motion, or pain. Post-event rehabilitation is very important to ensure the airman is able to safely perform all necessary flight duties. The FAA also requires a 2-year grounding period following any TIA experience.

### Certification Outcome

Upon review of this airman's submitted medical records, the FAA granted this airman a 3<sup>rd</sup>-class medical certificate. Their final determination considered the facts of a nearly complete resolution of prior symptoms, no additional symptoms, a normal neuro- and cardiovascular workup, as well as a 3-year period of recovery. Additionally, this airman was warned to immediately report any further symptoms that may develop. This case is a simple illustration of how important it is for an airman to provide proper and detailed medical records when requesting special issuance for a disqualifying condition. When all such records are received, only then can the FAA make an informed medical decision.

### References

1. Title 14 - Code of Federal Regulations, Aeronautics and Space; Chapter 1-Federal Aviation Administration, Department of Transportation: Part 67-Medical Standards and Certification (2002). Available at: [www.access.gpo.gov/nara/cfr/waisidx\\_02/14cfr67](http://www.access.gpo.gov/nara/cfr/waisidx_02/14cfr67)
2. Vibhuti NS. Coronary Artery Atherosclerosis: [www.emedicine.com/med/](http://www.emedicine.com/med/); Retrieved on 23 Jan 2005.
3. Orford JL. Atherosclerosis: [www.emedicine.com/med/](http://www.emedicine.com/med/). Retrieved on 25 Jan 2005.
4. Arnold J. Ischemic stroke: [www.emedicine.com/med/topic/](http://www.emedicine.com/med/topic/). Retrieved on 27 Jan 2005.
5. Nassisi D. Stroke, Hemorrhagic: [www.emedicine.com/med/topic/](http://www.emedicine.com/med/topic/). Retrieved on 27 Jan 2005.
6. American Stroke Association. Stroke: [www.strokeassociation.org/presenter](http://www.strokeassociation.org/presenter). Retrieved on 23 Jan 2005.
7. Tay KY et al., Imaging the vertebral artery; *Eur Radiol.* 27 Jan 2005.
8. Edwards WH, Edwards WH Jr. Vertebral-carotid transposition. *Semin Vasc Surg.* 2000 Mar;13(1):70-3.



## MG from page 9

effects prevent the airman from meeting the medical requirements for the safe operation of an aircraft under 14 CFR, Part 67.

The medications themselves may be a concern in some cases. In this case, the patient is on Imuran, an immunosuppressant. Its main interactions are with gold, antimalarials, penicillamine, and allopurinol. It has an increased cancer risk if taken with or after alkylating agents. Imuran may also cause a leukopenia or anemia if taken with ACE inhibitors, and it may antagonize warfarin. It has the following side effects: severe leukopenia and/or thrombocytopenia, secondary infections, mutagenic and carcinogenic potential, nausea, pancreatitis, hepatotoxicity, rash, and alopecia.

The airman is also on Mestinon, a cholinesterase inhibitor. It may reverse

the effects of non-depolarizing muscle relaxants and it is antagonized by atropine. It may cause GI upset, increased salivation and bronchial secretions, miosis, diaphoresis, muscle cramps, and (rarely) weakness.

The airman seems to represent a case in which the medication side effects are minimal-to-none, and the condition has been fairly stable over a long period of time. He will need to show neurologic status evaluations at the time of renewal of his certificates and have statements from his treating physicians documenting any changes in medications or his overall condition.

### Outcome

The airmen was granted a 3<sup>rd</sup>-class certificate, and the case will be regularly reviewed for future special issuance.

### References

1. Drachman DB. Myasthenia gravis. *N Engl J Med* 1994;330:1797-1810.
2. Richman DP, Agius MA. Myasthenia gravis: Pathogenesis and treatment. *Semin Neurol* 1994;14:106-10.
3. Engel AG. Neuromuscular transmission. In Cecil textbook of medicine, 21<sup>st</sup> ed. 1999; Saunders, p. 2221-3.
4. Glennerster A. Memory in myasthenia gravis: Neuropsychological tests of central cholinergic function before and after effective immunologic treatment. *Neurology* Vol 64: April 1996.
5. Goetz. Textbook of Neurology. 1999; Saunders, pp. 1024-6.



INDEX OF ARTICLES PUBLISHED IN THE *BULLETIN* DURING 2005

ARTICLE	VOLUME	PAGE
2004 AME Statistics and Published Research, by Mike Wayda	43-1	15
2004 AME Survey Results Published, by D. Broach, M. Dennis, D. Schroeder	43-2	3
AAM Awards for Excellence & Achievement, by Mike Wayda	43-3	12
Air Carrier Cabin Air Concerns: Congressional Testimony, by Jon L. Jordan, MD, JD	43-4	7
AirVenture Oshkosh Busiest Ever, by Nestor Kowalsky, MD	43-3	15
AME Seminar Being Held in Germany, by Mike Wayda	43-4	13
Announcing a New Brochure for Pilots: Medications and Flying, by Steve Carpenter, MD	43-3	8
AOPA's 'Turbomedical' is Not Approved as a Substitute for Form 8500-8, by Richard F. Jones, MD	43-2	1
Aviation Medical Examiner Profile: Robert Frayser, DO, by Mike Wayda	43-2	8
Burge, Kristine: 2004 CAMI Employee of the Year, by Mike Wayda	43-1	14
Burnett, Doug: CAMI Employee of the Year, by Mike Wayda	43-4	15
California Investigation Targets 'Disabled' Pilots: <i>Operation Safe Pilot</i> , by Stephen Griswold, MD	43-3	16
Case Report: Antisocial Personality Disorder and Medical Certification, by Kevin Connolly, MD, MPH	43-4	5
Case Report: Polycythemia in the Aviator, by James R. Elliott, MD, MPH	43-2	14
Case Report: Posner-Schlossman Syndrome and Medical Certification, by Stacey L. Branch, DO, MPH	43-2	12
Case Report: Pre-Diabetes, by Doug Files, MD	43-1	4
Case Report: Prostate Cancer, by Scott McLeod, MD	43-1	8
Case Report: Testicular Tumor in an Airman, by Sarady Tan, MD, MS, MPH	43-4	10
Case Report: Thymic Carcinoma, by Sacha St. Hill, MD	43-3	10
Case Report: Traumatic Subdural Hematoma, by Mical Kupke, MD	43-1	10
Certification Issues and Answers, by Warren Silberman, DO, MPH	43-1	5
Certification Issues and Answers: Syncope, by Warren Silberman, DO, MPH	43-3	4
Certification Update: SSRI Policy Reminder, by Warren Silberman, DO, MPH	43-2	9
Certification Updates: AASI Classification, Airman Data Entry by Internet, by Warren Silberman, DO, MPH	43-4	3
Collins, Dr. W.E.: Inducted Okla. Hall of Fame	43-1	14
Deakins, Dr. Dennis: New AMCD Aviation Medical Officer, by Mike Wayda	43-4	14
Editorial: A Surplus of Serendipity, by Jon L. Jordan, MD, JD	43-4	2
Editorial: Audit of Designee Program Favorable to Aerospace Medicine, by Jon L. Jordan, MD, JD	43-2	2
Editorial: Medications and Flying: Let's Get the Word Out, by Jon L. Jordan, MD, JD	43-3	2
Editorial: Robert S. Poole, MD: Aviation's Champion, by Jon L. Jordan, MD, JD	43-1	2
In Memoriam: Dr. Robert S. Poole, by R. Mark Adams	43-1	14
International AMEs To Get Fast Online Service, by Richard Carter, DO, MPH	43-2	4
Jordan, Dr. Jon: Receives Special Award, by Mike Wayda	43-1	15
Jordan, Dr. Jon: Retires as Federal Air Surgeon, by Mike Wayda	43-4	1
Letter to the Editor: AME Writes From Iraq, by Capt. John A. McGurty, Jr., MD	43-3	14
Letter to the Editor: Heart Statistics, by Larry Kaskel, MD	43-4	15
Letter to the Editor: Pre-Diabetes Certification, by Benjamin J. Henderson, DO	43-2	5
Letter to the Editor: Sperling, Dr. Arnold Returns From Iraq, by Dr. Arnold Sperling	43-4	6
Letter to the Editor: Sport Pilot, by Todd Fredricks, DO	43-2	5
Letter to the Editor: Sport Pilot Remarks, by J. Edwards, MD, & D. Hodges, MD	43-1	7
Letter to the Editor: Vision Questions, by William A. Blank, MD	43-3	14
Mineta, Norman: Briefs Press on Inappropriate Use of Lasers, by Robert Johnson	43-1	13
Mister Chairman... Federal Air Surgeon Testifies on Age 60 Rule, by Jon L. Jordan, MD, JD	43-3	11
New Aerospace Medical Certification Subsystem Version Being Prepared, by Warren Silberman, DO, MPH	43-3	1
New Certification Tiger Team Convenes, by Mike Wayda	43-3	15
New Medications Brochure In the Mail, by Mike Wayda	43-3	1
New Pilot Safety Brochure Available, Others Planned, by Mike Wayda	43-2	8
Online Ordering of Forms Now Available, by Mike Wayda	43-4	13
Quality Management System Being Implemented, by Jessica Gillece	43-4	15
Quick Fix: AME Specialty Codes, by Richard F. Jones, MD	43-1	1
Quick Fix: Don't Leave Early, by Richard F. Jones, MD	43-1	3
Quick Fix: Order Forms and Supplies Early, by Richard F. Jones, MD	43-3	3
Quick Fix: Training Delinquencies No Longer Tolerated, by Richard F. Jones, MD	43-3	3
Quick Fix: Where Did the Errors Go?, by Richard F. Jones, MD	43-4	1
Recognition of Service Members, by Mike Wayda	43-1	15
Recognizing Excellence: Dr. Jon L. Jordan, by Lynn McCloud & Mike Wayda	43-4	12
Salazar, Dr. G.J. Receives War on Terrorism Ribbon, by Mike Wayda	43-1	15
Seasonal Allergies or Sinus Infection?, by Christopher Blair, DO, MBA	43-2	1
Silberman, Dr. Warren: RAM Instructor of the Year, by Mike Wayda	43-4	14
Smallpox — Inappropriate Vaccination Site, by Johann S. Westphall, MD, MPH	43-2	10
Southern Region Assists 300 Airmen at Sun 'n Fun, by David P. Millett, MD	43-3	15
The Dreaded Medical, by Bill Cuccinello	43-2	6
Tiger Team Meets In High-Tech Conference, by Richard Carter, DO, MPH	43-4	14
URLs and You: AME Web Site Links Revised, by David Nelms	43-3	5
Volkman, Dr. Gerald: Remembered, by Stephen Griswold, MD	43-4	15
Wilson, Dr. Larry (Re-) Recalled to Active Duty, by Richard Carter, DO, MPH	43-2	16