



Federal Air Surgeon's Medical Bulletin

02-3
Fall 2002

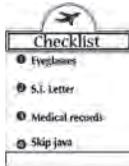
Aviation Safety Through Aerospace Medicine
For FAA Aviation Medical Examiners, Office of Aerospace Medicine
Personnel, Flight Standards Inspectors, and Other Aviation Professionals.



U.S. Department of Transportation
Federal Aviation Administration

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Misuse of the AME Designation

By Richard F. Jones, MD, MPH

Aviation Medical Examiners who issue medical certificates by mail, *without ever seeing the pilot*, perform cursory examinations, and allow para-professional medical personnel to perform examinations are subject to the termination of their AME designation.

ONE OF THE REGULATORY RESPONSIBILITIES of the Aerospace Medical Education Division (AAM-400) is to monitor the performance of aviation medical examiners (AMEs). It has come to my attention in a variety of ways that some AMEs may be misusing their designations. As a result, this division will begin to emphasize the surveillance aspects of our duties.

We occasionally receive calls from AMEs' offices asking if mid-level or non-AME

Continued on page 8...

New FAA Administrator Sworn In



Ms. Blakey

Marion Clifton Blakey was sworn in September 13, 2002 as the 15th Administrator of the Federal Aviation Administration, replacing Jane Garvey, whose five-year term expired on August 4.

"I was deeply honored when President Bush asked to me to lead the FAA, she said in an address to agency employees. "Now that I am on board, I am excited by the opportunity to work with you on the challenges facing the agency."

Prior to being named FAA Administrator, Ms. Blakey served as Chairman of the National Transportation Safety Board. As Administrator, she is responsible for regulating and advancing the safety of the nation's airways as well as operating the world's largest air traffic control system.



FAA Changes Foreign Pilot Certification

By FAA Aviation News

AS A RESULT OF THE MANY governmental changes that have occurred since the September 11, 2001, terrorist attacks, on July 16, 2002, FAA stopped issuing US pilot certificates to foreign pilots based upon their foreign pilot licenses. That ban continued until FAA's Flight Standards Service issued a notice late in July explaining its new issuance process.

The basic process has not changed. However, foreign pilots wanting a US private pilot certificate issued on the basis of their equivalent foreign private pilot or higher level pilot certificate must now submit to

FAA at least 60 days in advance the following information as part of a pre-application process. The FAA will use the information to verify the authenticity of the applicant's pilot certificate. Complete instructions and the new Verification of Authenticity form are available on the Internet at <http://registry.faa.gov>. The applicant must submit either the completed form with the required attached documents or a legible hand-written or type-written letter with the following:

Continued on page 6...

Alcohol Abuse

By Jon L. Jordan, MD, JD

POTENTIAL DRUG AND ALCOHOL ABUSE in aviation has been a long-term concern of the Federal Aviation Administration and especially, the Office of Aerospace Medicine. Going back to the early 1970s, the leadership of the then-Office of Aviation Medicine recognized that the potential for alcoholism in flight deck crews probably was at least comparable to what could be found in the general population.

At the same time, it was also recognized that the routine physical examinations of airmen were not identifying significant numbers of airmen who had drinking problems. In addition, a conservative approach to the medical certification of airmen with a history of alcohol abuse appeared to be driving airmen "underground."

The Federal Air Surgeon's Column



By Jon L. Jordan, MD, JD

Consider this when you examine your next airman: Alcohol abuse, while difficult to identify through a routine physical examination, remains a major aviation safety concern.

In an effort to cure what was believed to represent a significant safety problem for the air carrier industry, the Federal Air Surgeon began seeking ways to improve the identification of alcoholic airmen. The objective was to remove those airmen from their safety-related duties, get them into treatment, and if possible, return them to piloting duties.

The early years of attempting to build a means for identifying pilots with alcohol problems were marginally productive, and it was not until aggressive involvement of the Air Line Pilots Association in the mid-70s that significant headway was made in the initiative. Through a grant by the National Institute for Mental Health, the Human Intervention and Motivation Study spawned a cooperative enterprise between the FAA and the aviation community to deal with alcohol abuse by air carrier pilots.

The program was founded, in part, on the concept that, if pilots could be returned to duty within a reasonable period of time following rehabilitation and commitment to abstinence from alcohol, more pilots with alcohol problems would self-identify or be identified by peers. That is precisely what happened.

As an added measure to deal with concerns regarding drug and alcohol abuse in aviation, Congress enacted the

Omnibus Transportation Employee Testing Act of 1991. This Act codified the FAA's existing anti-drug program and led to the implementation in 1994 of alcohol testing requirements for segments of the aviation industry. Under these regulations, testing for alcohol is now required for certain workers in the industry, including pilots. These tests are required randomly, post accident, for reasonable cause, return to duty, and follow-up after return to duty.

You've probably seen or heard, through the news media, incidents of pilots who have reported for duty under the influence of alcohol and with blood or breath alcohol levels in excess of FAA regulations. In many of these cases, security personnel—and not co-workers of the pilots—have been responsible for reporting the pilots who appear to have recently used alcohol. Alcohol testing under FAA's regulations has, in most reported cases, confirmed the suspicions of the security personnel.

It is disturbing that pilots would report for duty with *any* levels of blood or breath alcohol. The threat to safety should be apparent to everyone and the threat to aviation careers, if nothing else, ought to prevent this from happening. It is also disturbing that security personnel seem to have become the first line of defense in identifying these problem pilots. This is the case, however, and it has become obvious that we must now carry out some careful introspection to determine what more might be done to prevent these incidents from occurring.

I began this column with the thought that the physical examinations of airmen have not proved effective in identifying many pilots with alcohol problems. I cannot help but wonder, however, whether this is because alcohol abuse is difficult to identify through a routine physical examination or because the examining physician has failed to see or ignored obvious clinical signs. This is something you might consider when you examine your next airman. Confronting the airman whom you suspect has an alcohol problem could be a major contributor to safety and, in the long run, a service to the airman.

JLJ

Federal Air Surgeon's Medical Bulletin

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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: <http://www.cami.jcabi.gov/AAM-400A/fasmb.html>

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Certification Issues

By Warren S. Silberman, DO, MPH

This will test your knowledge of medical certification procedures. See how well you can do on this test. If you ace them all, Dr. Silberman would like to hear from you. —Ed

I am going to try something a little different for this issue of the *Bulletin*. I've made up some questions to challenge the aviation medical examiner's expertise. All of these questions come from the *Guide for Aviation Medical Examiners*, October 1, 1999 edition. As always, there is a teaching point for each of these questions.

1 What is the name of the "waiver" that the FAA uses for medical conditions that can change over time? (See page 4 for correct answers.)

2 What is the name of a "waiver" for a medical condition that is static, such as *monocular vision*?

3 Six of the FAA's 15 Specifically Disqualifying Conditions are cardiac-related. *What are they?*

4 What are the minimum age requirements for the various airman certificates (for powered aircraft; *fill in the blanks.*)?

- A. Student pilot _____
- B. Private pilot _____
- C. Commercial pilot _____
- D. Airline transport pilot _____

5 Which regulation governs the prohibition of operations during a medical deficiency?

6 An airman (age 39) may receive a 3rd-class medical certificate that is valid for 36 months. *True or false?*

7 Which of the following can the Federal Air Surgeon do with an Authorization for Special Issuance (waiver)?

- A. Time limitation placed on medical certificate
- B. State on the Authorization and medical an operational limitation
- C. Can only be granted for a limited 2nd-class medical
- D. Condition the continued effect of the Authorization and any 2nd- or 3rd-class medical certificate based upon it, on compliance with a statement of functional limitations.

8 An Authorization granted to a person can be withdrawn if the holder fails to provide the medical information needed by the Federal Air Surgeon for certification under the Special Issuance section of 67.401. *True or False?*

9 You can issue a student pilot/medical certificate (FAA Form 8420-2, yellow form attached to Form 8500-8) to an airman who is 15 y/o. *True or False?*

10 You may issue an airman a medical certificate if he/she checks "yes" to question 13 on the front side of the FAA Form 8500-8 (Has your Airman Medical Certificate ever been denied, suspended, or revoked?) based on the airman's word. *True or False?*

11 When an applicant for medical certification has asthma that requires the use of medication, what data should you provide the AMCD?

- A. Type of medication
- B. Side effects of medication(s), if any
- C. Nature and severity of residual symptoms
- D. Electrocardiogram

12 Applicants who have had myocardial infarction, angina pectoris, cardiac valve replacement, permanent cardiac pacemaker, or who have undergone percutaneous transluminal angioplasty, stent insertion, atherectomy, or coronary artery bypass grafting may be certified for 1st-, 2nd-, or 3rd-class medical certificates. *Which controlling statute applies?*

- A. 14 CFR Part 61.53
- B. 14 CFR Part 61.23
- C. 14 CFR Part 67.401

13 For consideration, applicants for medical certification with a history of peptic ulcer within the past ___ months or a bleeding ulcer within the past ___ months must provide evidence that the ulcer is healed. (*Fill in the blanks.*)

14 Which of the following information must be provided to the AMCD for consideration after treatment for peptic ulcer?

- A. Confirmation of lack of symptoms
- B. Tests for H. pylori
- C. Radiographic or endoscopic evidence of healing
- D. Medication used

15 Which of the following skin conditions warrant deferral to the AMCD?

- A. Malignant melanoma
- B. Basal cell carcinoma
- C. Skin manifestation of lupus erythematosus
- D. Raynaud's phenomenon

Dr. Silberman manages the Civil Aerospace Medical Institute's Aerospace Medical Certification Division.

Answers on page 4...

Answers to Quiz from page 3

1. **A:** Authorization for Special Issuance (*AME Guide*, page 3).
2. **A:** Statement of Demonstrated Ability (SODA; *AME Guide*, page 3).
3. **A:** Angina pectoris, coronary heart disease that has required treatment or, if untreated, that has been symptomatic; myocardial infarction; cardiac valve replacement; permanent cardiac pacemaker; heart replacement (*AME Guide*, page 3).
4. **A:** A – 16; B – 17; C – 18; D – 23 (*AME Guide*, page 5).
5. **A:** Title 14, CFR 61.53 (*AME Guide*, pages 7 - 8).
6. **A:** True (*AME Guide*, page 7).
7. **A:** A, B, & D (*AME Guide*, page 12.)
8. **A:** True (*AME Guide*, page 12).
9. **A:** False. The AME may not issue a student pilot certificate (FAA Form 8420-2) to an applicant who is less than 16 years old. A medical certificate (FAA Form 8500-9) may be issued to an applicant irrespective of age. (*AME Guide*, pages 19 and 20).
10. **A:** False. An AME may only issue a medical to an airman who checks “Y” to #13, if (1) the applicant provides written evidence from the FAA that he/she was subsequently medically certified and the examiner is authorized to issue a renewal certificate or (2) the examiner obtains verbal or written authorization from the Regional Medical Office or the Aerospace Medical Certification Division (AMCD) (*AME Guide*, page 21).
11. **A:** A, B, & C (*AME Guide*, page 47).
12. **A:** 14 CFR Part 67.401, Authorization for Special Issuance (*AME Guide*, page 47).
13. **A:** 3, 6 (*AME Guide*, page 51).
14. **A:** A, C, & D (*AME Guide*, page 51).
15. **A:** A, C, & D (*AME Guide*, page 53).



Tapestry of Disaster: An Accident Story

By Parvez Dara, MD, FACP, ATP, CFII, MEI

OFTEN, IN HIS MOST REFLECTIVE moments, he would extol the many virtues of flying; the splendor of sights, of new places but mostly of its freedom. He was 60 on his last birthday, a 35-year Vietnam veteran with an artificial leg flying with a 2nd class certificate and a SODA.

He flew with precision, dedicated to his hobby and mode of transportation. Every flight was enriching to him. He carried his task of flying with zeal, from checklist to checklist, double-checking while motoring one to two miles above terra firma.

So on that cold, rainy night in October, when I got the news of his plane crash, it scared me, then chilled me, and finally numbed me. He was, in my mind, going to be an old pilot, for he was never bold. He flew this immaculately dressed Mooney 201. But the crashed plane was a Cherokee Six.

He apparently flew it with the gust locks still attached!

The plane had taken-off, gained 500 feet and then, predictably, plowed into the woods. This man, in life a stickler for checklists, in death was now the object of a storm of controversy and was leaving a legacy of stuff that he would not have been proud of.

They tried to piece together the shattered dreams of his mind and the associated features of the ill-fated flight on that rainy night in October. “Accidents don’t just happen,” said the aviation counselor from the FAA, “Planes don’t just fall out of the sky.” There is some truth to this, if you were to evaluate the cumulative vapor trail that eventually condenses into the big splash, multiplicity of factors have been involved.

Let’s look at the so-called 10-17% catastrophic engine failures in piston aircraft. I am not a betting man, but I can wager that most, or all of them, gave plenty of warning signals and hence, could have been averted. The gremlins may have shown up in a previous flight, in the pre-flight, or in the intuitive feel. The oil analysis may have revealed the

When we commit an error it is generally an isolated one, and we get away with it. This *getting-away* mentality reinforces the behavior as being okay. But start stitching a series of these scenarios together, and a tapestry of disaster unfolds.

chewed metal in the filter, maybe the need for more oil, a blob of oil on the ground, or discordant magnetos. In flight, it may have been a change of the aircraft’s behavior, in its speed, sound, dynamics, the hum, and all of the subtle noises that we are attuned to in the cockpit. This subtle vapor trail of metal, sound, feel, and dynamics is there for us to recognize.

When we commit an error it is generally an isolated one, and we get away with it. This “getting away” mentality, unfortunately, reinforces the behavior as being okay. But start stitching a series of these scenarios together, and a tapestry of disaster unfolds.

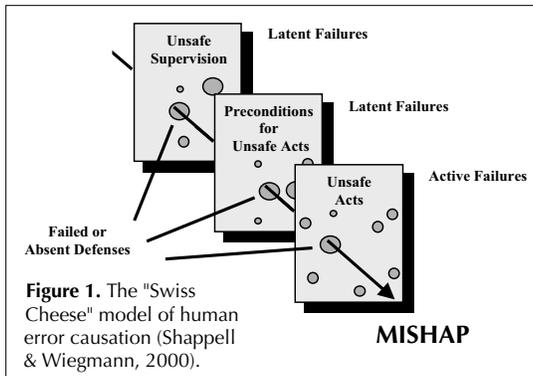
Imagine a series of cards with random holes in it reflecting the error-prone deficiencies of human beings (Figure 1). Each little hole reflects an act of omission or commission (failing to check the trim, or the fuel quantity, and so on; you get the point). Once in an unfortunate while, when those holes line up in sequence, an accident occurs.

The first priority to safety remains trying to patch the holes in each of those successive cards. Learning the art of flying, practicing it, constructing a practical checklist for all possibilities, and never taking flying for granted. For instance, every time before I fly into an airport, I look at its layout to see on

Continued ➤

departure where a straight-in engine out on take-off or landing would save my bacon. Not much but it keeps your guard up.

Consider the big boys who dream of



flying Mooneys but are stuck with the Boeings: They, too, can have a bad day. The flapless take-off in Detroit, Mich., led to hundreds dead – a minor mistake that led to a major tragedy. A Continental aircraft was about to land gear-up at the Newark airport until advised by an American pilot on the ground to put the wheels down. Mistakes from shoddy cockpit behavior, taking things for granted, or having the attitude that “I am the greatest” will bite.

Flying in low overcast without the prerequisite experience or attempting a crosswind landing beyond your abilities speaks volumes of the male gender. Some of the newly minted and even long-time pilots with little weather experience who venture into the gray unknown of an overcast day just for a rush or, better, stupidity, how can you justify that with anything but the remark, *idiots?*

There are preconditions for these unsafe acts (Shappell & Wiegmann, 2000):

Substandard Conditions of Operators

- Adverse mental states
- Psychological states
- Physical and mental limitations.

We have discussed some of them above.

Substandard Practices of Operators

- Cockpit Resource Management and Personal Readiness

The former is not flying with adequate charts, plates, or lack of their utility, etc.

The latter is when your instinct tells you, “*It is not good to go even on severe clear and a million,*” so heed it.

Now, I’ll get back to the story. My veteran aviator would occasionally drink beer but cognizant of the regulations, he would wait eight hours before flying. He mostly flew his Mooney, where his checklist was always dangling from the mixture control knob

and he never allowed himself to rush.

On the fateful night, he had consumed alcohol nine hours before, but he also had taken an over-the-counter medication for allergies, which it turns out, decreases the alcohol metabolism in the body (slows the breakdown of alcohol, hence the effects of alcohol are prolonged in the body). He was flying an aircraft that he was not totally familiar with, and all his tell-tale readiness checklists were not present to help him where they usually presented themselves before flight, and he was in a rush to pick up his friend from an airport only 20 miles away before a line of thunderstorms came through (that friend owned the Cherokee).

Now you see that in his cards all the holes had lined up (Figure 1). A careful, analytic mind reduced in alacrity, unencumbered by the weight of his previous knowledge through the harmful effect of persistent alcohol in his body, failed to see the cues of impending disaster. Having found none of the patterned elements that had kept him safe all along, his clouded brain edged him on that day and sought to play its own game of chance.

There are many lessons to learn from this story. My own guidelines are as follows; add on to them as you please:

- Know your limits
- Observe those limits
- Develop good habits – use checklists
- Follow those habits
- Rectify a “getting away” scenario; do not amplify it
- Be constructively critical of each flight
- Even the best pilots make mistakes – minimize the number and break the chain
- Always think about where is the possible error
- If intuition tells you something is wrong, prove the intuition to be wrong before proceeding. Intuition is mostly right.
- Alcohol, with or without medicines, is dangerous
- Ground yourself voluntarily if you need to for any medical reason. Death is not an option.
- Improve technique; periodically practice safe flight with an instructor
- If flying a different aircraft, become thoroughly familiarized with it before flight
- Do not violate the rules; they are the products of previous tragedies
- Good decisions are born of good judgments, and good judgments are born of prepared, rested, and alert minds
- Fly safe – always

Reference

Shappell SA and Wiegmann DA (2000). *The Human Factors Analysis and Classification System*. Washington, DC: Office of Aerospace Medicine Technical Report DOT/FAA/AM-00/7.



Dr. Dara is an aviation medical examiner who specializes in hematology and oncology in Toms River, N.J.; he is also a pilot with the ratings of Airline Transport Pilot, Certified Flight Instrument Instructor, and Multi-Engine Instrument with more than 2,400 hours in the air. He is a director of the Mooney Aircraft Pilot Association and a frequent speaker at ground and flight safety seminars.

Foreign Pilots from page 1

- Name of person
- Permanent home of record. If the paperwork is to be mailed to a separate mailing address, that information must be attached to the package
- The name of the country that issued the foreign pilot license
- The name of the FAA Flight Standards District Office (FSDO) where the applicant plans to apply for a US certificate
- A statement that the foreign pilot license is not suspended or revoked
- A legible copy of all of the pages of the foreign pilot license
- A legible English translation of the license if it is not in English
- A legible copy of the foreign medical license or endorsement, as appropriate
- A legible copy of a driver's license, passport, or other photo ID

Send all of this information to :
Federal Aviation Administration
Airmen Certification Branch
AFS-760
P.O. Box 25082
Oklahoma City, OK 73125
FAX: (405) 954-4105

The Airmen Certification Branch will authenticate the information with the appropriate foreign civil aviation authority. If the information is correct, the Airmen Certification Branch will send a Verification of Authenticity letter to the designated FSDO. The letter, which expires in 60 days from the date of issuance, is used by the named FSDO as the basis for processing the applicant's certification application. If the letter has expired or not been received by the FSDO, they cannot process the applicant's paperwork.

The Title 14 Code of Federal Regulations, Section 61.75 (Private pilot certificate issued on the basis of a foreign pilot license) application process remains the same.



Medical Certification Applicants: Be Aware of FAA Correspondence *Your FAA Mail Is Important*

By Charles P. Nicholson, Jr., MD, Senior Aviation Medical Examiner

MANY AVIATORS CONSIDER their Federal Aviation Administration medical certificate to be almost sacred (no intention to be sacrilegious)! However, the lackadaisical, often seemingly irresponsible attitude some applicants for the certificate exhibit regarding correspondence from the FAA does not support or confirm the high esteem in which the certificate is regarded.

The intent of this article is to inform applicants to be aware of all correspondence from the FAA regarding their medical certificate.

In practically every situation in which there is a "discrepancy" in meeting the certification standards, the applicant receives a letter from the FAA regarding the "discrepancy." For example, if the applicant has a history of kidney stone(s) or high blood pressure requiring medication for control, the FAA sends the applicant a letter acknowledging the history and describes what will be required for continued certification.

Applicants who require a Special Issuance receive Letters of Authorization that state the authorization period, specific actions required to maintain certification, and it may authorize an aviation medical examiner to issue another certificate if the stipulations in the Letter are met.



I am repeatedly surprised—and disappointed—by the nonchalant attitude that some applicants display regarding these letters! Typical comments include,

✓ *I don't remember receiving a letter*

✓ *My wife must have thrown it away*

✓ *I guess I forgot to bring it with me...*

You get the idea! We AMEs receive copies of the letter and show it to the applicant. You can imagine the responses and comments we observe!

Applicants, be attentive to all correspondence from the FAA regarding your medical certificate. Read the correspondence and comply with the request(s). Keep it in a safe, convenient (easy-to-remember) place, review it before the next application, and take it to your AME's office at the time of your medical examination.

Few things are as important to us aviators as our medical certificate. We must expend all effort to maintain it!



Dr. Nicholson, an AME since 1975, practices in Concord, N.C., is also very active in aviation and says he has "always wanted to be a pilot." Dr. Nicholson is an instrument-rated private pilot with ATP, CFII, and multi-engine ratings; he is also an Aviation Safety Counselor and a member of the Experimental Aircraft Association's Aeromedical Advisory Council.

SHARE

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Your Staff and Patients

A Checklist for Pilots Approaching the Flight Physical

Preparing for a Medical Certification Physical and Avoiding the Guesswork

By Robert J. Gordon, DO, Senior AME, Edited by Donald Ross, DO, Senior AME

This checklist was prepared by two long-time aviation medical examiners who know the value of good preparation by the applicant for medical certification. Although this checklist is not an FAA-generated or approved device, you might want to consider making a similar checklist available to your pilots. —Ed



PILOTS, YOUR AVIATION MEDICAL EXAMINER (AME) wants you to pass your medical exam. We know how important that continuing to fly is to you because most of us are pilots too. If you have any problems, your AME, the FAA, and your personal physician will work with

you to resolve them. We want you to be happy pilots and to leave our office with your medical certificate in hand. With that in mind, here is a checklist to follow during your approach to landing in our office. If you follow it, taking off again will be a piece of cake.

- Do not** forget your eyeglasses.
- Make sure you have a current eye exam and glasses, especially if your near/far vision has changed.
- Bring your Special Issuance letter from the FAA with you to the exam.
- If you have a Special Issuance medical, mail in all necessary medical information requested by the FAA by the required date.
- Bring all medical information outlined in your Special Issuance letter.
- Do not forget to tell your AME if you have one of the 15 disqualifying conditions: diabetes mellitus requiring hypoglycemic medications; angina pectoris; coronary heart disease that has been treated or, if untreated, that is symptomatic or clinically significant; myocardial infarction; cardiac valve replacement; permanent cardiac pacemaker; heart replacement; psychosis; bipolar disorder; personality disorder that is severe enough to have repeatedly manifested itself by overt acts; substance dependence; substance abuse; epilepsy; disturbance of consciousness without a satisfactory explanation of the cause; and transient loss of nervous system function(s) without a satisfactory explanation of the cause.
- Bring **all** required medical records from your personal physician regarding any chronic medical condition. (Examples: hypertension and asthma)
- See your personal physician for evaluation and treatment *prior* to medical exam if you have borderline high blood pressure.
- Avoid* coffee, decongestants, cigarettes, or any other stimulants prior to your exam. These all may raise your blood pressure.
- If you have a family history of diabetes mellitus (or other familial diseases), you need to have periodic checks with your personal physician prior to medical exam.
- If you have a family history of diabetes mellitus, **avoid** large amounts of sugar prior to the exam. Urinalysis will show positive sugar if large amounts are consumed prior to exam.
- Mark on question 17a. (under *Medications*) if you are taking a prohibited medication on a regular basis.
- Do not forget your SODA (Statement of Demonstrated Ability; e.g., color vision defect).



AME Shorts

Concise Certification Topics

By Warren S. Silberman, DO, MPH

ECG Transmissions Reminder

According to AME Order 8520.2E 2/1/99 (which is the regulation that covers all AMEs), all US senior aviation medical examiners must transmit the electrocardiograms that are performed as part of the 1st-class examination. The order specifies that *Effective October 1, 1999, all Senior AMEs must electronically transmit to the Aerospace Medical Certification Division the electrocardiogram data for 1st-class medical certification examinations.*

You should recall that all 1st-class airmen, at their first exam after reaching age 35, must have a baseline ECG and then every year after age 40. International senior AMEs have been and continue to be exempt from this requirement.

You do not have to transmit the ECG if you perform it as part of an Authorization for Special Issuance. An example would be our requirement for an ECG for the initial work-up for hypertension on medications. The ECG does not have

to be transmitted, but it must be mailed to the Aerospace Medical Certification Division (AMCD) in Oklahoma City.

Also, if you transmit the ECG, you **do not** have to send the hard copy in.

Suspicious Airmen

Immediately report to the AMCD those airmen who have partially completed their airman medical certificate application and then decided to leave the office before you had the opportunity to complete the physical examination. You should be particularly suspicious of airmen who inadvertently disclosed a positive history of medical problems or the use of medications and then left the office because they changed their minds about the disclosure.

These airmen may attempt to go to another AME and not disclose their medical problems to obtain a medical certificate.

Please mail these particular cases in to the AMCD as soon as they occur.

Envelopes

As you may recall, in July 2002, we sent all aviation medical examiners new envelopes. The reason for this was that

the current envelopes did not have a correct computer code and return zip code. Continuing to use this envelope would have resulted in the Postmaster charging us an additional fee for each letter.

In revising the envelope, we also decided to reduce its size so that it could fit without folding into our letters to you and airmen. This is because we had purchased a new folding and envelope-stuffing machine and there was a problem about folding and stuffing envelopes with this piece of equipment.

Well, the new, smaller envelopes were *too* small. So, we did some evaluation and testing and have decided to revert to using the original-size envelopes—with the revised code and return zip code.

You should have received a supply of these new envelopes in the mail and are to contact the Aerospace Medical Education Division if you require more of them:

FAA Civil Aerospace Medical Institute
Shipping Clerk, AAM-400
P.O. Box 25082
Oklahoma City, OK 73125



Misuse from page 1

providers can perform FAA medical examinations under AME supervision. Disgruntled airmen sometimes tell us when the person who signed their certificate did not perform the exam, and some AMEs also report similar suspicions about competing physicians. The frequency of these events has recently increased. The most disturbing report so far involves a pilot Web site chatting about an AME who issues medical certificates by mail, without ever seeing the pilot. Of course, most AMEs have heard anecdotal reports from pilots of examiners who perform cursory or no examinations.

In paragraph 11a.(2)(e) of FAA Order 8520.2E, it clearly states, as a condition of designation, that AMEs

“Personally conduct all examinations....” The paragraph further specifies that “paraprofessional medical personnel (e.g., nurses, nurse practitioners, physician assistants, etc)....” may contribute to, but not perform the examination; non-AME physicians are likewise limited. Paragraph 15b.(3)(c) states “disregard of, or failure to demonstrate knowledge of, FAA rules, regulations, policies, and procedures” and “unprofessional performance of examination” are grounds for termination of the AME designation. Staff members, mid-level, and non-AME providers who do not report the activities listed above are accessories in violation of federal regulation and may be prosecuted with a guilty AME.

We are exploring ways to identify AMEs that misuse their designations. One consideration is putting the information contained here in publications read by airmen, asking them to report when the signatory of their medical certificate is not the person who examined them. It would certainly help if more providers and staff members reported inappropriate practices; this can be done anonymously by calling the regional flight surgeon’s office or AAM-400.

I know these violations of the FAA’s trust are not the rule and involve only a few AMEs. It is too bad that the images of the large number of conscientious AMEs must be tarnished by these few. For those of you who follow the rules, thanks. Keep them flying—SAFELY!



Dr. Jones is the manager of the Civil Aerospace Medical Institute’s Aerospace Medical Education Division.

Case Report

Hydrocephalus and Seizures

By Meire Gonzaga, MD

Summary: Individuals with a history or presence of any neurological condition or disease that potentially may incapacitate an individual should be regarded as initially disqualifying. Issuance of a medical certificate to an applicant in such cases should be denied or deferred, pending further evaluation. This applicant has been ten years without seizures, two years off medication, and was surgically treated at an adult age; thus, his chances of having another seizure are low. If certain examinations do not show any abnormalities, he can be certified for a 3rd-class medical.

A 32-YEAR-OLD MALE was seen by an aviation medical examiner to obtain his 2nd-class medical certificate. The applicant related a history of neurosurgery in 1989.

History and Findings

The patient had been diagnosed with arrested symptomatic non-communicating hydrocephalus due to aqueductal stenosis, for which the treatment of choice is stereotactically directed third ventriculostomy. At that time, he complained of frequent headaches and decreased visual acuity. Papilledema was found on fundoscopic exam, with enlarged blind spots indicating increased intracranial pressure. He had no evidence of other neurological deficits.

He was treated with a ventriculostomy without complications. After surgery, he began having generalized seizures and was treated with carbamazepine 200 mg twice daily. In spite of the medication, he continued having headaches. An EEG showed a right-sided grade 2 dysrhythmia. A MRI of the head demonstrated a patent ventriculostomy. The mechanism of the headaches was obscure, but his neurologist suggested a “subclinical seizure with seizure

equivalent headaches” or “seizure aura, both of which are quite infrequent. His visual symptoms improved. A fundoscopic exam revealed definite improvement of the papilledema and normal blind spots bilaterally. His most recent seizure was in 1989.

During neurological follow-up, he attempted to lower his carbamazepine dose, but his headaches became worse. In June 1995, the patient presented for a certification exam, during which he was denied due to a diagnosis of epilepsy and treatment with carbamazepine. Subsequently, in June 1996 patient had an EEG that showed nonspecific slow waves in the right temporal lobe, that may in part be due to medication effect. A head MRI with 3rd ventricle flow analyses demonstrated 3rd ventriculostomy patency, with moderate to marked dilatation of most of both lateral ventricles. In December 1996, the use of carbamazepine was suspended. On August 6, 1998, the patient again applied for a 2nd-class medical certificate. He remained symptom-free and off medications. His physical exam was within normal limits. Again, the case was deferred to the FAA Aerospace Medical Certification Division (AMCD).



Discussion

Hydrocephalus results from one of three causes: over-secretion of cerebrospinal fluid (CSF), obstruction of CSF pathways, or impaired absorption of CSF. The first two causes are rare. Hydrocephalus due to over-secretion of CSF is thought to be secondary to a tumor of the choroid plexus. Hydrocephalus caused by the obstruction of CSF pathways is usually due to the aqueduct of Sylvius (aqueductal stenosis) and can be secondary to a congenital malformation, tumors, and/or scarring.

The third and most common cause is impaired absorption of CSF. This is present in communicating hydrocephalus, which may present with normal or elevated intracranial pressure, may be idiopathic, or result from meningitis or subarachnoid hemorrhage (7). Epilepsy is commonly associated with shunt-treated hydrocephalus. Its relation to the shunting procedure and the criteria identifying postoperative epilepsy remain controversial. Many studies have investigated the etiology of epilepsy in patients with hydrocephalus. The results are conflicting as the incidence of epilepsy in hydrocephalus ranges widely from 9 to 65% (3).

The terms “epilepsy” and “seizure” are used very liberally in the literature and thus contribute to the high number of reported cases of epilepsy. For

Dr. Meire Gonzaga was an international exchange physician from Irmandade Da Santa Casa De Misericordia De Sao Paulo University School of Medicine in Sao Paulo, Brazil, when she wrote this case report at the Civil Aerospace Medical Institute.

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a patient to be diagnosed with epilepsy, seizures must occur repeatedly and should not be caused by acute illness such as fever, electrolyte imbalance, or trauma (1).

A seizure is a paroxysmal event due to abnormal, excessive, hypersynchronous discharges in the central nervous system (CNS) and can have various manifestations, ranging from dramatic convulsive activity to experimental phenomena not reliably discernible by an observer (4). The meaning of the term *seizure* needs to be carefully distinguished from that of epilepsy. Epilepsy describes a condition in which a person has a current seizure due to a chronic, underlying process. This definition implies that a person with a single seizure, or recurrent seizures due to correctable or avoidable circumstances, does not necessarily have epilepsy. Thus, epilepsy, or seizure disorder, is defined as two or more, recurrent, unprovoked seizures (2, 4, 5). Piatt and Carlson (6) report that epilepsy is common among patients with hydrocephalus, and the risk of the development of epilepsy continues indefinitely for those patients. They studied 464 patients with hydrocephalus. The onset of epilepsy may precede, coincide with, or follow the diagnosis of hydrocephalus, and the current analyses extending 15 years from diagnosis of hydrocephalus showed no point beyond which hydrocephalic patients can be considered out of risk. The cause of hydrocephalus was strongly associated with the risk of epilepsy (patients with posthemorrhagic hydrocephalus had more chance of epilepsy). Surgical complications were only weakly associated with risk of epilepsy. A significant bias of this paper was the author's definition of epilepsy as the long-term administration of antiepileptic drugs for suppression of seizures (6).

In a study by Klepper et al. (3) of 182 patients with hydrocephalus, 20% developed epilepsy. The incidence of epilepsy varied according to the etiology of hydrocephalus: posthemorrhagic (5%), postinfectious (4%), congenital/miscellaneous/unknown (3%), myelomeningocele (2%), tumor/arachnoidal cyst/aqueduct stenosis (0%), and poor functional status. They concluded that epilepsy is related to underlying encephalopathy, rather than to surgical intervention. Thus, epilepsy as a complication of intracranial shunting might be overestimated in the literature (3). One should also consider that the younger the patient at the date of operation, the greater the chance of his developing an epileptogenic scar (8).

Aeromedical Disposition

The *Guide for Aviation Medical Examiners* (September 1996) indicates that individuals with a history or presence of any neurological condition or disease that potentially may incapacitate an individual should be regarded as initially disqualifying. Issuance of a medical certificate to an applicant in such cases should be denied or deferred pending further evaluation. Symptoms or disturbances, which are secondary to the underlying condition and may be acutely incapacitating, include pain, weakness, vertigo or incoordination, seizure or a disturbance of consciousness, and visual disturbance or mental confusion.

Returning to our patient, he did suffer a seizure after surgery for hydrocephalus due to aqueductal stenosis, so he had seizures and not epilepsy. He has been ten years without seizures, two years off medication, and was surgically treated at an adult age; thus, his chances of having another seizure are low.

So after evaluation, the AMCD determined that he needs to have a complete, current neurological evaluation. The report must address the status of the shunt and include a new EEG to check the hyper-excitable focus. If the exams do not show any abnormalities, he can be certified for a 3rd-class medical. He will require follow up every six months and, if he continues without any changes, he should be eligible for a 2nd-class certificate in two years.

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Meningioma in an Airman

By Pankaj D. Sheth, MD, MPH

A 44-YR.-OLD FAMILY PHYSICIAN, a third-class pilot with 200 hours of flying experience, applied for the renewal of his medical certificate. He had a left parietal, 2.5 cm.-size meningioma surgically removed on 2/4/99 near the saggital sinus, 4 cm behind the coronal suture (which is about the sensory strip). He still had residual numbness in the right lower extremity defined as crural paresis. He did not have any seizures after the surgery and was off anticonvulsants for one year.

Symptoms. His symptoms began in the summer of 1998, with numbness in his right little toe; going to the lateral aspect of his right foot, calf, thigh, and groin. It spread to the right abdomen, spared the chest, but sometimes went to the right side of his face. It came spontaneously and resolved fairly quickly without any treatment. The whole phenomena lasted about 2-3 minutes, with a frequency of 8-9 times per day. He denied weakness, headache, rashes, bladder, or bowel problems.

He had a Jacksonian sensory type of seizure six months prior to surgery and had balance problems. He went to the emergency room and was diagnosed as having left parietal meningioma by MRI on 1/6/99. His meningioma was removed on 2/4/99.

Post-operatively, he was started on Dilantin prophylactically; later was switched to Tegretol, which he was weaned off after several months. He was also on Decadron in tapering dose and Coumadin for postoperative deep vein thrombosis. He also had right foot weakness post-operatively, for which he used AFO for short time.

History. Heartburn, relieved by Mylanta; bilateral knee ligament laxity; T & A; hospitalized for pneumonia once.

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Meningiomas

Meningiomas are mostly benign tumors that appear to arise from arachnoidal cap cells; therefore, they can occur wherever there is dura. They may invade the skull but almost never invade the brain. They are more common in females (in 7th decade) than males (in the 6th decade). Meningiomas can also occur in childhood. They account for about 25% of all CNS tumors and are second only to gliomas. Common sites are along the sagittal sinus, over cerebral convexities, in cerebellar pontine angle, and the spinal cord dorsum. They are usually supratentorial.

Etiology. Genetic alteration: Cytogenic examination of chromosomes within brain tumor cells often reveals loss of genetic material from long arm of chromosome 22q (deletion). Malignant meningiomas are associated with deletion of loci on chr.1p, 9q, and 17p. Exposure to ionizing radiation is a documented environmental risk factor for the development of brain tumors. It is common in patients who have neurofibromatosis.

Meningiomas have receptors for sex hormones, and patients with breast cancer are at increased risk. Receptors found are for progesterone, estrogen, androgen, dopamine, and beta-receptor for platelets derived growth factor. The role of head trauma is dubious in the development of meningioma in later life.

Clinical presentation. Clinical presentation of meningiomas depends upon their location and size. Most meningiomas are asymptomatic and found to be less than 2 cms. at autopsy or incidental findings at the time of an MRI. The patient may present with seizure, headache, and focal neurologic deficit. Visual loss may result from a compression of the optic nerve, but anosmia and mental status changes are often unrecognized. There may be tenderness to pressure or percussion of the skull over the site of a meningioma.

Diagnosis. Plain radiographs of the skull show changes like calcification and hyperostosis or thinning of adjacent skull tissue in 50-60% of cases. Non-contrast CT shows a well defined, hyper-dense mass with coarse calcification. Small meningiomas are better visualized on CT than MRI. MRI is the commonly ordered diagnostic test after a thorough neurological examination.

Treatment. The primary treatment for symptomatic meningioma is surgery. Meningiomas are not always curable, even if they are completely excised. The recurrence rate depends on the completeness of removal, the tumor's site, and its biological aggressiveness. Even after complete removal, the recurrence rate varies from 8 to 20% over 10 years. For patients with obvious residual tumors, the recurrence rate can be as high as 55% over 10 years.

◆ External beam radiotherapy has control rates of 50 to 90% at 10 years. Stereotactic radiosurgery, using a linear accelerator or gamma knife, limits the radiation to surrounding brain tissues and, while it has promising results, followups are too short to construct firm conclusions.

◆ Thirty percent of all meningiomas have estrogen receptors and can be treated with antiestrogen Tamoxifen and medroxyprogesterone acetate. Seventy to eighty percent of meningiomas have progesterone receptors and can be treated with antiprogesterone mifepristone (RU486). Multicenter studies are currently evaluating the efficacy of this approach.

◆ Corticosteroids are used as supportive therapy to reduce peritumoral edema for short durations

◆ Anticonvulsants are generally used for convexity meningiomas for 6-12 months post-operatively

◆ DVT precaution used for short-term during post-operative period

Letters to the Editor

ALTERNATIVE COLOR VISION TEST A WINNER

Dear Editor:

I wanted you to know that a recent article in the *FASMB* [Color Vision in Black and White, spring 2002, p. 10] was right on point for me. My 3rd-class medical comes up next month. I was nervous about the test for shapes in a field of colored dots. Your article presented several alternatives if additional testing is necessary.

I called my eye doctor and took the first alternative test as a practice run. And I passed with (pardon the pun) flying colors.

*Mike Ruff
Pampa, Texas*

*Larry Nazimek
Chicago, IL*

FATIGUE COMMENTS

Dear Editor:

Re: **Fatigue and Desynchronosis in Aircrew** (*FASMB*, summer 2002, p. 8). NASA's studies have shown that for

long flights, that it is beneficial to have planned rest periods whereby one cockpit crewmember can take a nap. For those flights where crews could take these planned naps, they had far fewer microsleeps during later phases of the flights than did the aircrews in the control group.

Some foreign carriers permit these planned rest periods, but the FAA does not. I have heard that the policy is, along with other crew duty/rest requirements and limitations, being looked into, but it has been quite a few years since NASA did some of these studies.

Why, therefore, in light of NASA's studies, does the FAA still prohibit these planned rest periods?

The author of the article, Dr. Virgil Wooten, replies:

The FAA recognizes that fatigue is a significant and important problem in air operations. The FAA is moving as quickly as possible to

address crew rest and fitness for duty issues. Because of the diversity of aircrews and operations, it is difficult to formulate a single good regulation that satisfies all concerns and individual differences. However, it is likely that the current regulations will change to reflect our new understanding of sleep physiology and pathology. Another factor to be considered is the increasing use of cockpit automation that may change crew resources needed for safe flight. But for now, the non-flying crew on international flights is not restricted but encouraged to rest. The crew on national (CONUS) flights with no backup, i.e. no additional person(s) to alternate with, is not permitted to nap since they are part of the required active flight crew. The FAA recognizes that a rested crew is a better crew, but they must get their rest before or during flights when they are not on duty.



Meningioma from page 11

Social history. Denies use of alcohol or smoking.

Current medication. Aspirin, Pravachol.

Physical examination. Height 78", weight 253 lbs., BP 128/84, pulse 60 BPM. Remainder of the physical was normal on 3/2/01.

Certification outcome. As per approved aviation medical examiner protocol, an epileptic, to be eligible for medical certification must be seizure-free for 10 years and off anticonvulsant medications for at least 3 years. After 10 years, full neurological evaluation with EEG will be required for consideration. For provoked single-seizure, when the cause is corrected, then the medical certificate is considered with as little as one year after recovery with

full neurological evaluation. This applicant falls between the category of being epileptic and having a single provoked seizure.

Also, for an intracranial tumor (meningioma), before eligibility for medical certification can be recommended, the applicant will require a full neurological evaluation, plus appropriate laboratory and imaging studies. Most importantly, the meningioma would require removal. If the finding is of a benign supratentorial tumor, then he may return to flying status after a satisfactory convalescence of at least 1 year.

With the scenario presented above, the medical certificate was deferred by the aviation medical examiner. However, with a normal, full neurological evaluation by a neurologist and normal MRI report, the applicant would be eligible for a medical certificate.

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Dr. Sheth was a resident in Aerospace Medicine from Wright State University, rotating at the Civil Aerospace Medical Institute when he wrote this report.

Office of Aerospace Medicine NEWS



100% success for all six working in this office! The Louisville, Ky., office staff of aviation medical examiners Dr. **Glenn Stoutt** (left) and Dr. **Mike Howard** made a perfect 100% score on the Multi-Media Aviation Medical Examiner Refresher Course (MAMERC) test. Office manager **Kelli Benningfield** (proudly displaying her certificate of training), along with five others on the office staff, made their perfect scores this summer.

Nicholas A. Sabatini, associate administrator for regulation and certification, AVR, recently toured the



Civil Aerospace Medical Institute. His office oversees the Office of Aerospace Medicine and is responsible for the certification, production approval, and continued airworthiness of aircraft; certification of pilots, mechanics, and others in safety-related positions. Mr. Sabatini is also responsible for certification of all operational and maintenance enterprises in domestic civil aviation; development of regulations; civil flight operations; and the certification and safety oversight of some 7,300 US commercial airlines and air operators. He replaced **Thomas E. McSweeney**, who retired about a year ago.

NASA-FAA Study Turbulence Aloft. The Civil Aerospace Medical Institute supported the National Aeronautics and Space Administration who conducted a series of research scenarios to investigate preparing a wide-body aircraft cabin for oncoming air turbulence. Flight crews from 3 airlines and some 70 subjects participated in the research using CAMI's B-747 aircraft cabin environmental research facility in Oklahoma City during the trials Oct. 1-3. The results will provide reliable estimates for cabin readiness requirements, a benchmark for developing clear air turbulence warning systems, and further research to prevent passenger and crew injuries caused by turbulence.



CAMI Director Attends Hispanic Summit. Dr. **Melchor Antuñano**, director of the Civil Aerospace Medical Institute, was nominated by Okla. Senator **Don Nickles** to attend the First National Hispanic Leadership Summit in Washington, DC, September 17-18, 2002. This summit provided a forum for about 350 Hispanic leaders from across the country to discuss a range of policy issues with members of the US Congress and the Bush Administration. "At this critical time in our nation's history, it is imperative that our nation's Hispanic leaders and our federal officials exchange ideas about the most pressing issues affecting our families, communities and nation," said Sen. **Kay Bailey Hutchinson**, chairman of the Summit. Several members of President Bush's cabinet addressed the Summit's attendees, including Housing Secretary **Mel Martinez**, Education Secretary **Rod Paige**, Health and Human Services Secretary **Tommy Thompson** and White House Chief of Staff **Andrew H. Card, Jr.** (Continued on page 16)

Dr. **Anne Harlan**, director of the FAA's William J. Hughes Technical Center in Atlantic City, N.J., visited the Civil Aerospace Medical Institute recently. She is pictured here after a "spin" in CAMI's Virtual Reality Spatial Disorientation Simulator. Dr. Harlan holds a PhD in applied research psychology from Ohio State University and is a commercial, multi-engine pilot.



This column has had for its theme the past five years that your own lifestyle is responsible for about 70 percent of your health problems. It is just as important to realize that you—even more than your physician—are responsible for your own good health.

YOU ARE PROBABLY IN CONTROL of 70 percent of your personal health care. You own the challenge of being healthy much more than we physicians do.

Here's one example: An article appeared in the newspapers in 2001 stating that physicians were giving cholesterol-lowering medications to only about one-third of the people who would probably benefit by getting them. About 100 million Americans have elevated cholesterol numbers to some degree, so this information needed to be looked into.

Why weren't physicians prescribing lipid-lowering medication more often? Why was medication often delayed until the patient already had some vascular problem, such as angina or a heart attack? Why were younger people (in their 40s and 50s) not being treated?

All too often, the cholesterol-lowering medications were given only after arteries had already been badly damaged and clogged. How could a layperson get reliable information on this and be able to make an *informed decision*?

One has to ask the *right* question to the *right* person (concerned, dedicated physician) to get the *right* answer. What are the right questions to ask on your next visit to your personal physician?

In a televised interview, **Tom Clancy**—the hugely popular writer of techno-thrillers—was asked how he possibly could have gotten the vast amount of highly technical information he had, which some even suspected of being highly classified? Did



TAG TEAM. "Doc, I think this crud's under control...get ready to come in here if I need ya!"

he have secret access to the Pentagon? His answer was simple: "You can find information about *anything* if you have access to a telephone and a library." Add a computer and search engine to this and the knowledge of the world is available to you.

So, where to start? I just keyed in the American Heart Association (AHA) Web site (www.americanheart.org) and found more information on blood lipids (total cholesterol, HDL cholesterol, triglycerides, and LDL cholesterol) than I could assimilate over the weekend.

A further site gave a chart, which *simplified* most of the information and gave current (updated) guidelines anyone can understand. If you don't have access to a computer, call the local AHA or go to your library for help. Any adult should have an initial baseline lipid profile. Then ask your physician to explain the results to you in person (not just mail them to you) and decide if anything needs to be done.

TOPICS AND ISSUES

Just for the Health of Pilots

By Glenn R. Stoutt, Jr., MD, Senior
FAA Aviation Medical Examiner

Here are the current guidelines from the **National Heart, Lung, and Blood Institute** (www.nhlbi.nih.gov):

Step 1

Determine lipoprotein levels; obtain a complete lipoprotein profile after a 9- to 12-hour fast (overnight usually).

LDL (Low-Density Lipoprotein Cholesterol). This is the bad cholesterol that is responsible for blocking your arteries, and the primary target of therapy.

Under 100 ----- Optimal (great!)
100-129 ----- Near optimal
130-159 ----- Borderline high
160-189 ----- High
Over 190 Very high (danger sign)

All figures represented as mg/dl
(milligrams per tenth of a liter)

Total Cholesterol (TC)

Under 200 ----- Desirable
200-239 ----- Borderline high
Over 240 ----- High

HDL Cholesterol (The "good" cholesterol; acts as a scavenger to remove LDL)

Under 40 ----- Low (undesirable)
60 or over ----- High (good)

Triglycerides. Think of them as free fats in the blood. High levels are associated with heart disease.

Under 200 ----- Desirable

Step 2

Are any of your arteries diseased? Get this information from your physician.

Step 3

Major risk factors other than elevated LDL

Continued ➤

Dr. Stoutt is a partner in the Springs Pediatrics and Aviation Medicine Clinic, Louisville, Ky., and he has been an active AME since 1960. No longer an active pilot, he once held a commercial pilot's license with instrument, multi-engine, and CFI ratings.

- Cigarette smoking
- High blood pressure
- Low HDL (under 40)
- Family history of premature heart disease (very important risk factor; you can't change this, but it is a *great early warning* to monitor your heart health.)
- Men 45 or over; women 55 or over
- Diabetes

Discuss all these results with your physician, and then get an evaluation of your estimated *total risk* for future cardiovascular (especially heart) problems.

If your LDL is high:

- Of course, no one should smoke, especially those with risk of heart disease.
- Reduce fat in your diet to about 10 percent. Try to completely avoid saturated fat and trans fats.
- Exercise!
- Weight management. Abdominal fat is especially a risk factor.
- Add soluble fiber to your diet (such as oatmeal).

All of these measures are beneficial and should be continued permanently, but you can expect from them at most about 20 percent reduction in cholesterol. *So what if you have done all you can with diet, exercise, and weight loss and your cholesterol is still high?* It's your responsibility to ask your physician about what to do. Get a specific answer.

Many physicians now think a reasonable choice might be this:

- If your total cholesterol continues to be 240 or over, medication should strongly be considered.
- If it is 200-240, ask your physician if any other factors that make you at greater risk indicate that you should take cholesterol-lowering medication.

The FAA approves almost all of the medications now on the market to help you control your cholesterol. (Baycol has been proved dangerous and taken off the market by the Food and Drug Administration.) The only contraindication to any of these medications is a history of liver disorders, and so periodic liver-function tests are done as a safety measure.

Heart Attack Warning Signs

No matter what your risk factor for a heart attack is, you should be familiar with the warning symptoms of a heart attack (blockage of essential blood supply to the heart).

Cardiologists stress that **time is muscle**. The longer blood supply to heart muscle is blocked the greater likelihood of permanent damage to the heart. *The optimum window of opportunity for getting help is one hour after symptoms begin.*

Heart Attack Symptoms

Courtesy of the American Heart Association, from Web site: americanheart.org/

Some heart attacks are sudden and intense—the 'movie heart attack,' where no one doubts what's happening. But most heart attacks start slowly, with mild pain or discomfort. Often people affected aren't sure what's wrong and wait too long before getting help. Here are signs that can mean a heart attack is happening:

- **Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- **Discomfort in other areas of the upper body.** Symptoms can include pain or discomfort in one or both arms the back, neck, jaw or stomach.
- **Shortness of breath.** This feeling often comes along with chest discomfort. But it can occur before the chest discomfort.
- **Other signs.** These may include breaking out in a cold sweat, nausea or lightheadedness.

If you or someone you're with has chest discomfort, especially with one or more of the other signs, don't wait longer than a few minutes (no more than 5) before calling for help. Call 9-1-1...Get to a hospital right away.

Calling 9-1-1 is almost always the fastest way to get lifesaving treatment. Emergency medical services staff can begin treatment when they arrive—up to an hour sooner than if someone gets to the hospital by car. The staff are also trained to revive someone whose heart has stopped. You'll also get treated faster in the hospital if you come by ambulance. If you can't access the emergency medical services (EMS), have someone drive you to the hospital right away. If you're the one having symptoms, don't drive yourself, unless you have absolutely no other option.

Some pilots may be on overnight layover and have some of the above symptoms, and decide, "I'll just see how I do and see my own physician first thing tomorrow." *Bad decision.*

Skin Cancer

As long as we are talking about preventive care, why not consider *the largest organ in the body, the skin?* Cancer of the skin is not only our most common cancer, but also the most curable—if found early. The incidence of melanoma, a highly dangerous type of skin cancer, is growing rapidly. Early diagnosis is most important, because if the melanoma is still in the superficial layer of the skin it is usually curable. If a melanoma has spread, the prognosis is not so good.

The American Academy of Dermatology (www.aad.org) is a good site for information on skin cancer, especially facts about prevention. Another good site is The Skin Cancer Foundation (www.skincancer.org).

Some characteristics of melanomas are:

- **Asymmetry:** A line through the middle would not create matching halves
- **Border:** Irregular, scalloped, poorly defined
- **Color:** Varied from one area to another. Shades of tan, brown, or black. Sometimes even white, red, or blue.
- **Diameter:** Greater than the diameter of a pencil eraser.

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Health from page 15

Early Detection Aids Available

Breast Cancer. A plastic card designed to hang in the shower serves as a reminder for women to practice the three-step approach to breast health: mammography, clinical breast exam, and breast self-exam.

Testicular Cancer. Aimed at the younger male, this "Get Smart Card" includes basic facts about testicular cancer: warning signs, incidence, what to do.

How to Order. Write to:

American Cancer Society
Diane Peterson
8400 Silver Crossing, Suite H
Oklahoma City, OK 73132
Or call (405) 782-1737

About once a month, check your skin thoroughly. A good time is during your shower and drying off. (Also a good time for men, especially young men, to check for testicular cancer and women to re-examine breast tissue.)

There is no argument about the value of periodic breast exams and Pap smears in women. Many physicians recommend prostate exams and PSA (Prostate Specific Antigen) tests in men. Screening for colon cancer may save thousands of lives by testing for occult (not visible) blood, sigmoidoscopy, and colonoscopy. Ask about these exams during your physician visits.

You can find thousands of reputable sources that provide clearly understandable information about any medical condition you can think of. Make sure your reference material is sound.

Remember the extreme value of a family history of disease or illness. You are at greater risk for *anything* that a relative or ancestor has or had. (One man could not remember what his father died of, but he said, "I don't think it was anything serious.")

For your health's sake, take charge. You are the number one person to care of "Number One."

Yours for good health and safe flying,

Glenn Stoutt



Note: The views and recommendations made in this article are those of the author and not necessarily those of the Federal Aviation Administration.

Aviation Medical Examiner

2002-3 Seminar Schedule

December 2 - 6 ----- Oklahoma City, Okla. ----- Basic (1)

2003

January 10 - 12 ----- Phoenix, Ariz. ----- CAR (2)

March 10-14 ----- Oklahoma City, Okla. ----- Basic (1)

April 25-27 ----- Atlanta, Ga. ----- OOE (2)

May 5-8 ----- San Antonio, Texas ----- N/NP/P (3)

June 9-13 ----- 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.

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CAMA AWARD WINNER. Dr. Warren S. Silberman, manager of the FAA Aerospace Medical Certification Division, was awarded the President's Commendation by the Civil Aviation Medical Association (CAMA) at the association's annual meeting in Amsterdam, Holland. Dr. Silberman, a long-time CAMA member was praised for his "constant willingness to support and participate in CAMA meetings," responsiveness to requests for assistance, and "unbounded enthusiasm for the field of aviation medicine."

CAMA president Dr. Robin E. Dodge made the presentation.



Dr. Silberman, Pictured With the CAMA President's Award