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Bulletin - March, 1997

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BULLETIN

of the CIVIL AVIATION MEDICAL ASSOCIATION

MARCH, 1997

MEET OUR PRESIDENT

Our current CAMA president, Allen Duane Catterson, M.D. is a physician currently practicing at the Houston Intercontinental Airport. Duane, as he is known to his friends, operates the aviation and occupational medicine airport clinic of Houston's well-known Kelsey Seybold Clinic. He founded the airport clinic in 1971, and remained the chief physician at that site when Kelsey-Seybold purchased the facility in 1983.

Dr. Catterson was born in Denver and graduated from medical school at the University of Colorado. After a tour as a flight surgeon with the US Air Force, he continued in aerospace medicine and earned his M.S. at the Ohio State University. Upon completion of his academic training, he served another year at the famed Lovelace Foundation in Albuquerque, New Mexico.

Prior to opening the clinic at the Houston airport, Duane spent nine years with NASA Houston. During his last five years there, he served as Deputy Director of Medical Research and Operations.

Dr. Catterson today consults with a number of major air carriers including Continental Airlines. He also serves as a medical review officer for several of Department of Transportation regulated companies.



CAMA President and Mrs. A. Duane Catterson

(MEET OUR PRESIDENT continued on page 7) ✈ ✈ ✈

SOME INSULIN TREATED DIABETICS CAN FINALLY FLY

A landmark FAA policy change has paved the way for some diabetic pilots who require insulin to apply for and be approved for Class III medical certification. The requirements for obtaining this special issuance certification are detailed elsewhere in this issue of the CAMA Bulletin. Very detailed, conservative conditions must be met by diabetic airmen to be permitted to hold these third class certificates. Applications will be reviewed on an individual basis and will require each diabetic pilot to adhere to a detailed self monitoring protocol prior to and during each flight. First and second class medical certification will not be considered by the FAA at this time, and insulin using, diabetic pilots who receive special issuance will not be allowed to fly their aircraft beyond the borders of the United States.

AME's have been promised detailed information about the new protocol in a future revision of the Guide For Aviation Medical Examiners. Meanwhile, the article by Stacy Vereen, M.D. contains detailed information to assist in the counseling of diabetic airmen and in the preparation of applications for those who qualify for consideration for special issue of medical certificates under the new rule.

BULLETIN of the Civil
Aviation Medical Association
(CAMA)

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BULLETIN Editor

The *BULLETIN* of the Civil Aviation Medical Association (CAMA) is published bi-monthly for CAMA members and others interested in aviation medicine.

The CAMA motto is: "Pro Bono Publico," "For the good of the public."

CAMA's organizational purpose is: "To provide the civil aviation physicians with education, representation to government and a voice with industry and the public."

The *BULLETIN* editor welcomes submissions of articles/photos for publication. Please mail text in typewritten form or in WordPerfect software on floppy computer disk to:

James L. Harris
CAMA Headquarters
P.O. Box 23864
Oklahoma City, OK
73123-2864
(405) 840-0199
FAX (405) 848-1053

CAMA BULLETIN EDITOR RESIGNS

As this bulletin was going to press, our long-time editor, Robert L. (Bob) Wick Jr., M.D., tendered his resignation and President Duane Catterson reluctantly accepted his letter of resignation. At issue was the question of editorial autonomy versus the need for the President and Executive Committee to feel comfortable that general bulletin content and personal opinions of the editor are clearly differentiated in the way they are presented to our readers.

The editor had prepared two articles noting the resignation of Frederico Peña as Secretary of Transportation and David Henson as FAA Administrator. He was asked to label these two items as editorials because they reflected the personal views of the editor in addition to the factual accounts of the resignations and the appointment of Mr. Peña to the Cabinet post of Secretary of Energy.

Bob has always believed strongly that the editor must have full control over what is printed and over the format of the bulletin. He resigned rather than allowing that principle of autonomy to be compromised. President Duane Catterson and the entire Executive Committee expressed their disappointment and sadness over this development. Duane Catterson stated "The CAMA Bulletin has been a lively, outspoken journal. The appearance of each subsequent issue has been eagerly anticipated by CAMA members. All of the elected officers are deeply appreciative of the contribution that Bob Wick has made to our organization through his past leadership and many years as editor of the bulletin. We are truly sorry that he felt it necessary to step aside. His editorial touch will be sorely missed."

John Boyd, D.O. has graciously consented to act as interim editor so that publication of this bulletin and subsequent issues would not be unduly delayed.



Wanted



WANTED: dedicated CAMA members willing to make further contribution to our education, public relations, and legislative programs. Become a Sustaining Member by applying to the Board and paying \$180.00 per year in dues. Your status and dedication as a Sustaining Member will be recognized in CAMA publications and respected by your peers. Our award plaque will proclaim to your friends and patients your participation and CAMA's gratitude.



PRESIDENT'S MESSAGE ✈ ✈ ✈ ✈ ✈ ✈

Dear Colleagues:

Although the title of President still feels very new to me, it will have been more than three months since I was installed in this office by the time you read this page, so it is high time for a progress report.

Your Board of Trustees and elected officers have been busy. We met for a one day retreat at the Arlington Marriott Hotel near the DFW Airport on December 7, 1996 and adopted a number of initiatives all aimed toward increasing the value of CAMA membership and stimulating AME's who are not now members of our organization to want to join us in our effort to promote safe and sensible aviation medical policies and programs.

First of all, we have agreed to step up the rate of publication of the bulletin from four issues a year to six issues. Making this move means that we have to spread the responsibility for identifying and writing newsworthy articles more widely among our members than has been the custom in the past. As most of you know, we have taken the talents of our capable journal editor largely for granted and left it almost exclusively up to him to write as well as edit our bulletin. Despite his wealth of experience and talent for staying abreast of newsworthy developments in the realm of private aviation, the task of gathering and writing a new issue of the bulletin every two months is an unfair burden. Consequently, the officers are committed to producing newsworthy reports on a regular basis and submitting them for incorporation in the bulletin. We expect to have frequent articles discussing issues that are of concern to CAMA members such as the proposal for self-certification of medical fitness to fly as "recreational pilots" which the FAA still has under consideration.

In spreading the responsibility for more active participation in the preparation of the bulletin, we are taking the first step toward actively encouraging greater participation by all CAMA members in making this an ever stronger and more meaningful organization. At the suggestion of President-elect Jack Hastings, the officers will be conferring by telephone on a regular basis to expedite the review and disposition of subjects that should be of concern to CAMA or are worthy of public commentary by CAMA. This should result in more frequent and timely position statements not only to governmental agencies but also to the general public through press releases expressing CAMA's stand on civil aviation medical subjects.

We agreed at the retreat that your president should prepare a letter to be delivered to all participants of FAA AME seminars this coming year inviting them to join CAMA. This invitation will be delivered by our CAMA speakers at the scheduled FAA seminars this year and we hope that increasing numbers of the seminar attendees will be motivated to join us.

Preliminary plans for the scientific meeting in New Orleans this fall were discussed. We had hoped to secure FAA accreditation for the meeting as a training seminar for aviation medical examiners. After a mutual review of the feasibility of presenting an accredited seminar sponsored by CAMA at no cost to the FAA, we found that the government budget constraints resources make this one goal out of our reach. Freed from the formal FAA course requirements, the meeting promises to be one that is rich in relevant clinical material for AME's. There will be sufficient group activities and interesting topical presentations that are not simply a rehash of how to perform pilot examinations. This will make the September meeting a memorable and refreshing experience for all. This scientific meeting will be approved for CME credit, as always (AMA category I and AAFP Prescribed).

As you can see from the above, new things are happening within our organization. These changes are the products of the enthusiasm and constructive suggestions from individual members of CAMA. The more that each of you participates in CAMA activities, the stronger our organization will be. Please take a few minutes to send your thoughts and suggestions to CAMA headquarters c/o Jim Harris or directly to me. My address, phone number and fax number are all in the current membership roster that Jim Harris revised last year. Let's make this a year of member activism. Your ideas and comments are welcomed and will be carefully considered.

A. Duane Catterson, M.D., M.S.
President

CAMA OFFICERS 1997

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AEROMEDICAL CERTIFICATION OF THE INSULIN TREATED DIABETIC

BY

H. STACY VEREEN, M.D.

Recent history of aviation medicine reveals a trend toward the liberalization of the medical standards and certification. We should not view this trend as laxity on the part of the FAA, but rather an attempt to conform the FAA standards to fit the needs and safety requirements of the real world cockpit environment. There is no doubt that cockpits have gotten friendlier (quieter, better climate controlled, better sound systems, more ergonomically designed and certainly more comfortable) but medical technology has made great advances also. The development of modern medicines that are efficacious without the side effect profile of the earlier versions make it possible for many otherwise grounded pilots to be considered for aeromedical certification. Blood pressure medications are a good example of this. In the past, diabetes was considered to be the end of the road for a pilot career. Once hung with the diagnosis of diabetes mellitus, pilots were left with few alternatives. Several years ago the FAA began considering limited pilot certification for pilots who are under adequate control with diet or oral medications. Not all NIDDM pilots could gain recertification and the rules are fairly strict. But many of these pilots could and did qualify. Now the Office of Aviation Medicine has announced that it will begin considering for the first time ever, insulin treated diabetics for third class medical certification. This consideration will be strictly on a case by case basis under the Special Issuance Provision of Part 67.401 of the FARs. Since Special Issuance is alive and well within the Civil Aeromedical Institute in Oklahoma City, there is no regulatory change necessary. This only represents a policy change within the agency. Many view this as one of the most significant (not to mention controversial) policy changes to come out of the FAA for quite a while. This question of the insulin treated diabetic airman taking to the skies has been a hot issue among the various organizations that represent pilots, as well as among many AME's and other doctors who have concerns and misgivings about such a venture. Most sport, private pilot and general aviation organizations are understandably elated. The insulin treated diabetic represents a tiny but vocal segment of their constituency. But, since only third class medical certification will be considered, it is predictable that professional pilot organizations are less enthralled. The Aerospace Medical Association had concerns, so did many members of your organization, CAMA. Reactions have run from exuberance to caution, from surprise to dismay. However, the emotional highs and lows alike were dampened when the restrictions and safeguards inherent in this new protocol were understood. Notable is the term insulin treated diabetics, rather than the much more familiar insulin dependent diabetic (IDDM) and the non-insulin dependent diabetic (NIDDM). The term "insulin treated diabetic" would put all applicants taking insulin under this policy change, whereas a pilot taking insulin might claim to be non-dependent on insulin for his disease but merely taking it because he chose to. It's clear that if an applicant takes insulin, he should be under this rule. The inherent increased risk for sudden incapacitation through hypoglycemia is very real and should be considered. Less important, but perhaps still significant, is the fact that treatment with insulin implies a more severe disease - less control for whatever reason - including the sub-group of late onset diabetics who are non-compliant with diet and/or medications, hence wind up on insulin as a last ditch effort to control the disease. That these same individuals might be less than compliant with the rather strict FAA protocol is of some concern. There will be less concern perhaps, after reading the protocol and the discovery therein that the FAA has covered its hypoglycemic bases very well.

The second problem with insulin treated diabetic airmen is the late complications of diabetes. These can be further sub-divided into the macrovascular problems of cardiovascular disease and the major microvascular problems of retinal, renal and neurological pathology. Because these sorts of complications are insidious, frequent monitoring will be required. Incapacitation from an M.I. can be just as deadly as hypoglycemia.

The rationale for any restrictive policy in certification must be based on flight safety. The insulin treated

(DIABETICS CAN FLY continued on page 6) ✈ ✈ ✈

diabetic presents us with the two basic problems alluded to above: Hypoglycemia & Chronic Complications. The most common problem, as well as the most acute (and potentially the most deadly) is, of course unrecognized and thereby untreated hypoglycemia. Flying is a thinking man's game and, as you know, our thinking apparatus doesn't store glucose or glycogen, so low blood sugar is fraught with all sorts of mental aberrations of which we are all familiar. This begins with little lapses in judgement and ends in coma. This whole spectrum is inconsistent with safe flight. The saving grace for most diabetics is the recognition of these impending hypoglycemic episodes and the correction with the ingestion of glucose or something that quickly becomes glucose in the body. The protocol itself is presented below with some practical hints on what it means and how to implement it.

- I. Miscellaneous limitations
- II. The initial certification requirements
- III. The inflight requirements for monitoring and managing glucose levels
- IV. The ongoing recertification requirements

I. MISCELLANEOUS LIMITATION AND REQUIREMENTS

1. Class of Certificate: Third Class Medical Certification Only.
2. Privileges: Student, recreational or private pilots only.
3. Flight Restriction: In United States airspace only.
4. Special Requirements: Be in compliance with the monitoring requirements (explained later) while exercising the privileges of the Third Class Medical Certificate.

II. INITIAL CERTIFICATION REQUIREMENTS

1. Applicant must show no other disqualifying conditions, including diabetic related complications, such as atherosclerotic coronary or cerebrovascular disease, retinal disease or chronic renal failure.
2. History of no more than one hypoglycemic episode.

HYPOGLYCEMIA: DEFINITIONS AND POLICY

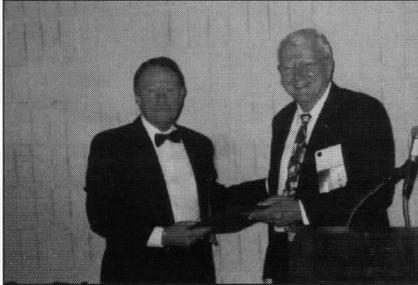
The FAA is pretty clear that if an applicant has had two episodes of hypoglycemia that have resulted in loss of consciousness, seizure, impaired cognitive function or has required the intervention by a third party, then this will preclude consideration for certification. If the applicant has had only one episode of any of the foregoing, then a period of one year of demonstrated stability is required to be considered for special issuance of a third class medical. Last, but not least, on the issue of unrecognized hypoglycemia, a specialist must verify that the applicant has been educated in diabetes and its control and thoroughly understands the monitoring and management procedures and how to handle impending hypoglycemia. The specialist must also comment as to whether he/she thinks the individual has the ability and willingness to handle his/her diabetes. Any specter of hypoglycemia unawareness should certainly be noted.

3. The applicant must submit copies of all medical records, diabetic diagnosis and disease history, hospital records (if admitted for any diabetes related cause including accidents and injuries). Copies of reports of any incidents or accidents, particularly moving vehicles, whether or not the event resulted in injury or property damage, if it was due in part or totally to diabetes.
4. Complete medical evaluation by an endocrinologist or other diabetic specialist, acceptable to the Federal Air Surgeon.
5. Complete medical history, current medical condition, general physical examination, which at a minimum shall include:



THE BIRD AWARD

Mr. William K. Kershner with his wife received The Bird Award. For more than forty years, Mr. Kershner has been a pilot, writer, educator, contributing to aviation safety. He started flying at the age of fifteen and continues doing what he most enjoys, teaching others how to fly.



THE PRESIDENTS AWARD

H. Stacy Vereen, M.D. Receiving The Presidents Award from CAMA President James L. Tucker Jr., M.D.

LETTER TO THE EDITOR

Betty and I would like to thank you and CAMA for the generous hospitality at the recent meeting in Norfolk.

We met very interesting and friendly doctors and spouses and enjoyed every minute of it. The trip to Williamsburg was well planned and executed and Betty and I thought that the group was low key and fun, with no egos showing.

Naturally, the high point of the meeting was my receiving the Forrest and Dominique Bird award and plaque which now hangs in a prominent spot on my wall for visitors (and me) to scan at every opportunity. The honorarium was most welcome as well.

Again, many thanks for the honor that CAMA has given me and I will follow the organization's fortunes in the press and by word of mouth from the members.

Best Regards,

**Sincerely,
William K. Kershner**

Our current president also holds an appointment as Adjunct Associate Professor at the University of Texas in Houston and has been elected a Fellow in the Aerospace Medical Association. In addition, he volunteered for a number of civic appointments. These included service as a City Health Officer in El Lago, Texas, and as a member of several Chambers of Commerce.

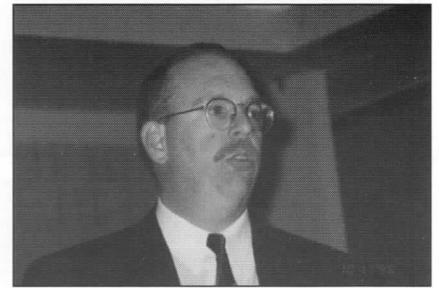
(MEET OUR PRESIDENT continued from page 1) ✈ ✈ ✈

Dr. Catterson is clearly an asset for CAMA. Members are always welcome to call or write him about any items of mutual interest. He can be reached directly at his clinic or through CAMA headquarters. As with all presidents however, he's only able to be as effective as the feedback he gets from members. He'd like to hear from as many CAMA physicians as possible.

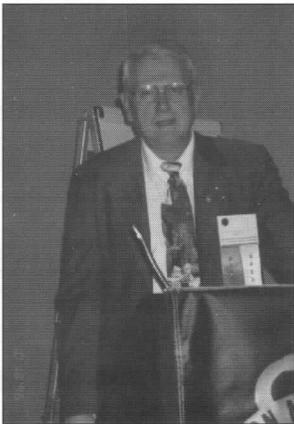
1996 CAMA SPEAKERS



Mike Bagshaw of British Airways



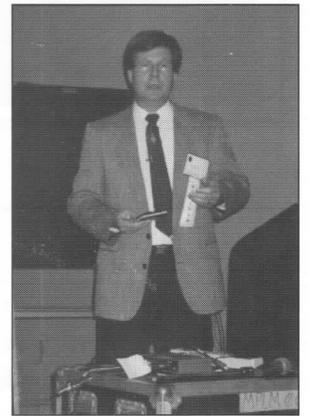
Kieth Martin
Speaking at the CAMA Meeting



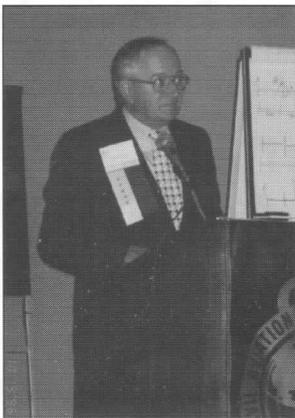
James Tucker
CAMA President



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Federal Air Surgeon



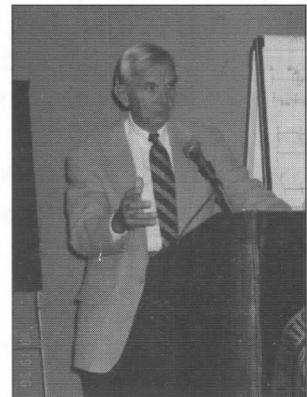
Stephen A. Veroneau
CAMA Scientific Meeting



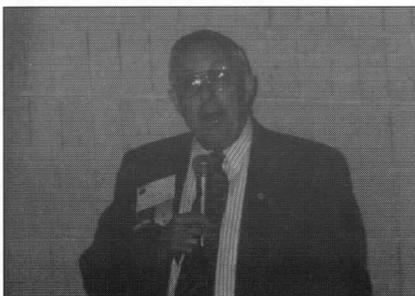
Ralph D. Lach
CAMA Scientific Meeting



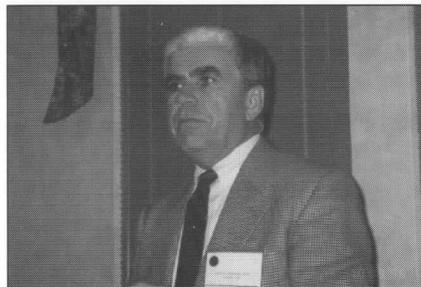
Sarah Valway
CAMA Scientific Meeting



Earl Beard
CAMA Scientific Meeting



Chuck Berry
Speaking at the CAMA Meeting



Jack Hastings
At the CAMA Board Meeting



Nancy Robinson Masters
CAMA Luncheon

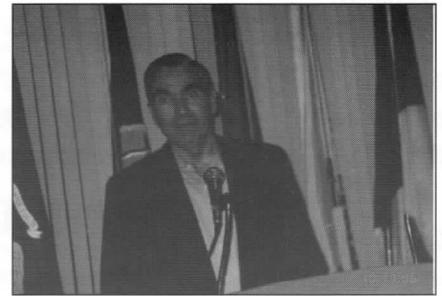
- VIRGINIA BEACH, VA



General Roadman, Nancy Robinson Masters
& James Tucker



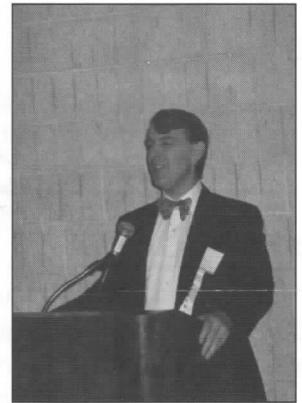
Colonel Elmo C. Baker
CAMA Luncheon



Col. Russell B. Rayman
CAMA Dinner Buffet



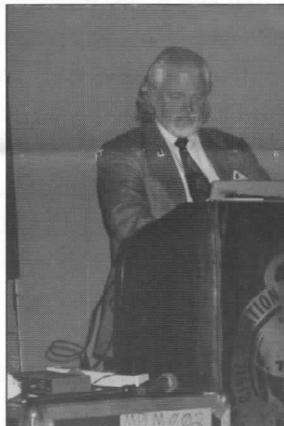
David Millett
CAMA Scientific Meeting



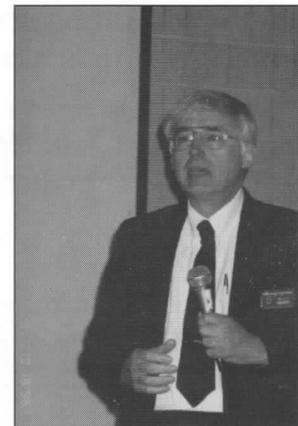
Michael Bagshaw,
British Airways
CAMA Banquet Speaker



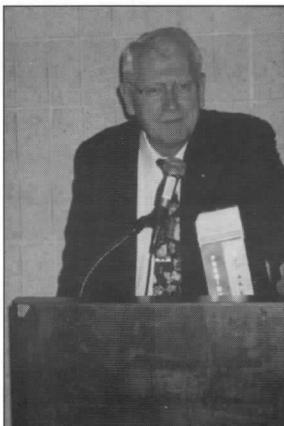
Amos Willis
CAMA Scientific Meeting



F. Robert Glatz
CAMA Scientific Meeting



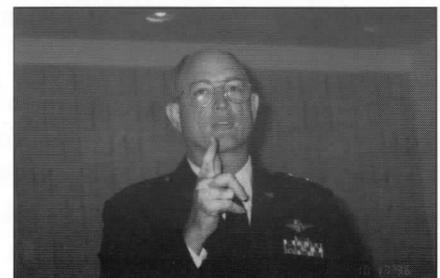
Jerry Hordinsky
CAMA Scientific Meeting



James Tucker
CAMA President



Larry Wharton
At the CAMA Scientific Meeting



Major General Charles Roadman
At the CAMA Annual Meeting

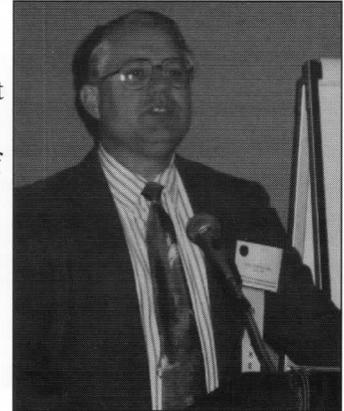
PROBLEM CASE - AN ABNORMAL URINALYSIS

by Steve Carpenter, M.D.

Scenario

Mary Smith is a 24 year old applicant for a Class III medical certificate. This is the first time you have seen her in your office. She states on her application that she is a private pilot with 345 total hours and that she is taking oral contraceptives. The rest of the front of the 8500-8 form is unremarkable except for routine annual visits to her gynecologist.

On your physical examination, the only abnormality you note is a trace of ankle edema. Otherwise, she appears very healthy. Her vision, hearing, and vital signs are normal. Her urinalysis does show a 2+ reaction for proteinuria on a dipstick although it is negative for glucose. Since you routinely use multitest dipsticks for urine testing, you note that it is also positive for blood.



Questions to think about:

1. What normal physiologic function could account for the findings?
2. Was it proper to test for blood in the urine?
3. Now what?

Scenario (Continued)

You ask a few more questions and learn that she is not menstruating and probably will not be for about 10 more days. She denies any other health problems except for a fairly severe URI and sore throat about three weeks ago which she treated with rest, fluids, and over-the-counter medications. You tell her that you will not be able to issue the medical certificate until the cause of the hematuria and proteinuria has been established. She asks you to help straighten this out. Eventually, you arrive at a diagnosis of acute glomerulonephritis, most probably on a post-streptococcal basis. Her serum creatinine is about three times normal, a microscopic urine check shows red cells and casts, and her 24 hour urinary protein excretion is about twice normal.

More questions:

1. Can Mary Smith be given a medical certificate?
2. Should such a certificate include limitations?
3. If she can't hold a certificate at present, what will it take to allow her to hold some sort of medical certificate?

Discussion

I'll discuss this case and the questions posed in reverse order. I would be hesitant to certify Ms. Smith at the present time. The diagnosis of a post-streptococcal glomerulonephritis (PSGN) seems reasonable based on the history and laboratory findings. This condition usually has a good chance of resolving completely, but on the other hand, there is at least a possibility of either chronic renal disease or rapid progression to renal failure. Since we can't really predict the course, we should delay certification for awhile to see if complications develop. If the condition resolves or at least greatly improves over the next few weeks, then she probably can be certified at that time based on a good current status report from her treating physician. We may time-limit the certificate and ask for a follow-up or two but we would soon clear her without limitations.

If complications do occur, then we have other things to think about. A slowly progressive chronic renal condition may be certifiable with relatively close follow-up (reports every 6-12 months from the treating nephrologist). Rapid renal failure would obviously be disqualifying. Regardless of the rate of failure, an individual requiring dialysis will also be disqualified. Dialysis (peritoneal or hemodialysis) has too great a risk for complications (particularly subtle cognitive changes) to allow certification. Renal transplantation however, is often certifiable once the initial recovery period is successfully completed.

→ → → (continued on page 11)

CIVIL AVIATION MEDICAL ASSOCIATION

Corporate and Sustaining Members

The financial resources of individual members alone cannot sustain the Association's pursuit of its broad goals and objectives. Its forty-five year history is documented by innumerable contributions toward aviation health and safety that has become daily expectations by the world's flying population. Support from private and industrial sources is essential for CAMA to provide one of its important functions, that of education. The following support CAMA through Corporate and Sustaining Memberships:

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D. Owen Coons, M.D., MPH
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Floyd F. McSpadden, M.D.
Young Stokes, III, M.D.
Dennis H. Wessels, M.D.

Thomas R. Berglund, M.D.
John H. Boyd, D.O.
A. Duane Catterson, M.D.
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Joseph F. Anders, President
Chicago, Illinois

Rummel Eye Care, P.C.
1022 Willow Creek Road
Prescott, Arizona

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Dominique Bird, President
Sandpoint, Idaho

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Testing for hematuria, ketones, or other substances is an interesting question. It is our policy that the only urine testing routinely required for medical certification is for protein and sugar. If these tests are abnormal, then further testing is appropriate. In the above scenario, since the protein determination was abnormal, then there was no problem when the blood was found. Had the sugar and protein both been negative, then the applicant might have claimed that the test for blood was improper.

On the other hand, the finding of blood in the urine despite the absence of sugar and protein will usually require further study before medical certification can be granted. The best policy is to test for sugar and protein only, even if you have to remove the other test pads from the chem-strip. An individual with no known renal disease and no other abnormal findings may still be certified if the urine shows only a trace or 1+ protein since many insignificant (at least from an aeromedical standpoint) conditions such as menses, mild dehydration, or minor urinary tract infections can cause a slight proteinuria.

Menstruation is a frequent cause of abnormal urinalyses. Even a "clean-catch" sample can be contaminated. In these cases, the simplest approach is to wait a few days and recheck the urine. It will usually be perfectly normal then, but if it isn't, a further evaluation is probably warranted.

(CAMA thanks Dr. Steve Carpenter of the FAA's Oklahoma City staff for this latest in his interesting and informative series of civil aeromedical problem cases. - Ed.)

- A. Two measurements of glycolated (A1C, A1, glucated) hemoglobin and the laboratory reference normal range. The first such measurement at least 90 days prior to the second.
- B. A detailed report of the insulin dosage, including types, amounts and any diet used for glucose control.
- C. Maximal stress EKG for applicants age 40 or older.
- D. An examination and if indicated, diagnostic tests to detect any peripheral neuropathy.
- E. Confirmation by an ophthalmologist of the absence of any clinically significant eye disease. This ophthalmology report can be submitted on FAA Form 8500-7: Report of Eye Evaluation.
- F. The verification by the specialist of the monitoring and management procedures, the education given to the applicant, the applicant's understanding of hypoglycemia and any presence or absence of hypoglycemia awareness.
- G. The applicant must also, of course, allow his/her physician to provide information to the FAA if requested/required.
- H. The applicant will also be required to have been stable on his/her insulin treatment for at least six months prior to the request of special issuance.
- I. Under Part 67.401 the Federal Air Surgeon can require a special flight test to determine the applicant's eligibility. The intent at this time is to require an initial flight test to determine that the applicant can adequately perform an inflight blood glucose test while safely controlling the aircraft.
- J. Also under Part 67.401 the applicant agrees to immediately report any adverse changes in his condition to the FAA. This is true for all special issuance situations.

III. INFLIGHT REQUIREMENTS FOR GLUCOSE MONITORING AND MANAGEMENT

1. The individual shall maintain medical supplies for the purpose of monitoring and management of his/her disease, while piloting and/or acting as a crew member in an airplane.

WHAT IS NEEDED TO MONITOR AND MANAGE

If a pilot is to monitor and manage his/her glucose level in the flight environment, he/she will need a whole blood digital glucose monitor, and since he/she is going to have to present this monitor during the recertification process, it will need to have memory. The FAA's intent is presently to accept all FDA approved Glucose Monitoring Systems that have a memory sufficient to store the necessary data for three months. Most all insulin treated diabetics are now in possession of one of these monitors and have been educated on their proper use. The other supplies, of course, would include the Reagent Strips, alcohol swabs and lancets. To manage the blood sugar fluctuations in the cockpit, the pilot should have enough rapidly absorbable glucose appropriate to the potential duration of the flight. Since glucose is cheap and easily storable, to be on the safe side, one could certainly take what he/she needs for the duration of any particular flight and double or triple it. There should be less excuse for running low on glucose in the cockpit than for running low on fuel (and there are not many excuses for that). A good 5 gram portion of rapidly absorbable glucose comes in a tablet made by Bectin Dickinson and is carried by virtually all pharmacies. The FAA will, however, accept any rapidly absorbable form of glucose that can be reasonably measured so that 10 or 20 grams can be ingested rapidly.

2. The disposable supplies must be within the expiration date. The critical supplies here are the strips and the batteries in the glucose monitoring device. An extra set of batteries for this glucose monitor, readily accessible in the cockpit, would be a good idea.
3. The airman must establish a blood glucose greater than 100mg/dL but not greater than 300mg/dL within a half hour prior to take off. "Prior to take off" can be considered engine start. Minor delays for clearances or landing traffic, etc. will not be critical. This glucose determination will be recorded

- on the Glucometer and if the blood glucose measures less than 100mg/dL, the individual should ingest a 10 gram glucose snack. In 30 minutes, a check and documentation of the blood glucose level should be accomplished. If the glucose concentration measures greater than 300mg/dL, then the individual must follow his/her regimen of glucose control until the measurement of glucose is between 100mg/dL and 300mg/dL. Only then can the individual consider flight.
4. During flight, the airman shall measure and record his/her glucose, every hour, beginning with the end of the first hour of flight. If the glucose is less than 100mg/dL, the individual shall then ingest a 20 gram glucose snack and recheck and document the concentration again after an hour. If it is between 100mg/dL to 300mg/dL the individual may continue the flight as planned, but there again, check the blood glucose level in an hour. If the blood glucose level is greater than 300mg/dL the individual shall land as soon as practical at the nearest suitable airport.
 5. The FAA recognizes that there will be times when the individual cannot adhere to these requirements. (Increased workload due to adverse weather, equipment failure are examples of this.) If the glucose measurements cannot be done, then the individual shall instead ingest a 10 gram glucose snack and one hour after this ingestion, the individual shall then measure his glucose again. If he is still unable to perform this measurement safely, he should have a 20 gram glucose snack and land as soon as practicable at the nearest suitable airport.
 6. The individual is also expected to perform and record a glucose measurement thirty minutes prior to landing. Of course if the individual is operating under the above guidelines that cover adverse conditions precluding glucose testing, then this half hour prior to landing test is also waived.

BETWEEN 100mg/dL and 300mg/dL - NO INSULIN

The FAA Guidelines are roughly based on keeping the blood glucose level between 100mg/dL and 300mg/dL. If the level falls below 100mg/dL then the airman must ingest an appropriate glucose snack. If the level rises above 300mg/dL, contrary to the initial proposal, the FAA requires the airman to land as soon as practicable rather than try to self administer insulin in flight.

IV. THE ONGOING RECERTIFICATION REQUIREMENTS

A. Annual Requirements:

1. Specialist Report to include his 4 quarterly reports.
2. Ophthalmologist Report
3. Flight Physical (with AME comments, if appropriate.)
4. At age 40 and at 5 year intervals thereafter, a maximal stress EKG.

ANNUAL REPORTS EXPANDED

The recertification process is also geared to follow the late complications of diabetes (as well as to check on the presence or absence of hypoglycemic episodes). The applicant will be required to go to his/her specialist every three months and undergo a general physical exami-

(DIABETICS CAN FLY continued on page 14) → → →

IN MEMORY

Dr. Wilson L. Kiragu, Nairobi, Kenya

Dr. Kiragu was an aviation medical examiner, a long time CAMA supporter, and Director of the Bethesda Clinic in Nairobi.

Dr. Milton H. Gordon, Jerusalem, Israel

Dr. Gordon practiced in New Jersey, USA for many years, and then moved to Israel where he served as the Federal Air Surgeon. He was active in CAMA and in the field of aviation medicine. Dr. Gordon had recently invited CAMA members to visit him when in that part of the world, and to correspond with him via e-mail.

CAMA extends its condolences to the families of these physicians. They will be sorely missed.

nation and undergo testing of the total A1 or A1C hemoglobin concentration and any other tests deemed necessary by the specialist or that are clinically indicated. This encounter with the specialist will also contain an assessment of the individual's continued ability and willingness to monitor and manage his diabetes and whether this specialist thinks the individual can reasonably be expected to safely control an aircraft. This quarterly report will not be required by the FAA until the application for annual renewal of the original certificate comes due, so although the applicant undergoes these examinations by the specialist quarterly, these reports are then furnished to the FAA annually.

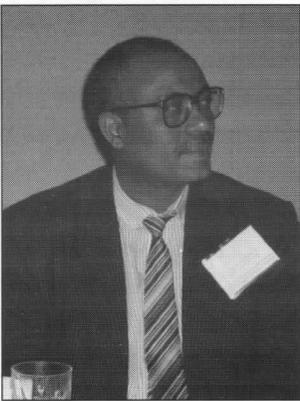
B. Immediate Requirements

1. Report to FAA *IMMEDIATELY* any episode of hypoglycemia resulting in cognitive impairment, cease flying until cleared by the FAA.
2. Report to the FAA *IMMEDIATELY* any accident or adverse event - including those involving motor vehicles, aircraft, etc.
3. Report to the FAA *IMMEDIATELY* any determination by any physician of loss of diabetes control, significant complications or inability to manage diabetes. The airman must cease flying until cleared by the FAA.

The FAA also welcomes the comments of the AME relative the applicant's diabetes and his control thereof. The airman should understand that any negative quarterly report precludes flying until the situation is resolved or stabilized and approved by the FAA. The AME is, in all cases, to defer certification to the Civil Aeromedical Institute. So a report from the specialist including the results of the quarterly examinations must be submitted along with an annual evaluation by an ophthalmologist (as in the initial evaluation, the FAA Form 8500-7 - Report of Eye Evaluation - may be used). The FAA intends at this time to issue third class medical certificates with a duration of one year. Each year the airman will be responsible for submitting the required documentation in a timely manner (that means at least 30 days prior to the expiration date of the certificate.) At the present time the FAA will not require an annual flight physical. On years that the flight physical is due (every third year for applicants under age 40 and every other year for applicants 40 and older) the assessment by the specialist, the ophthalmology report AND the form 8500-8 should be sent to the Civil Aeromedical Institute in Oklahoma City. In years that the flight physical is not due, it is

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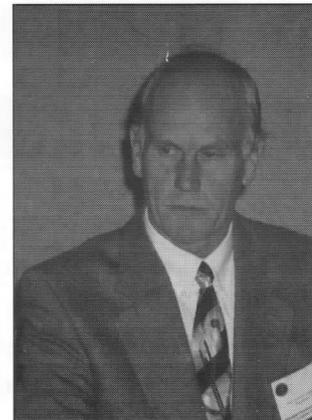
INTERNATIONAL MEMBERS



Aynalem Gebremariam, M.D.
Ethiopian Airlines at the CAMA Banquet.



Dr. & Mrs. Heinz Wykypiel, Austria
at the CAMA Banquet.



Per-Johan Cappelen, M.D., Norway
at the CAMA Banquet



M. Ghaheri, M.D., with Earl Beard, M.D. on
the Panel at the CAMA Scientific Meeting

WELCOME NEW CAMA MEMBERS → → → →

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I.C. Minkes, D.O.
17615 SW 97th Avenue
Miami, FL 33157

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only necessary to send the quarterly specialist reports, the annual specialist exam, and the ophthalmology report to the FAA. The FAA will review the data and if "all is well" then Oklahoma City will mail the airman a medical certificate that is valid for another year.

In any case, the information should be submitted as one package to the FAA. There is no requirement for this, but trying to merge various reports, received separately at different times by an organization that processes thousands of pieces of paper every day is not easy and is fraught with all sorts of delays. The airman and the FAA are better served by the "one package" method.

So, the requirements are formidable. Will any diabetic meet these strict standards? You bet they will? There are many very conscientious diabetics out there who have been stable on insulin for a long time and have demonstrated their conscientiousness with meticulous blood sugar control and willingness to participate actively in the management of their disease. Some of these, unfortunately, have had several hypoglycemic episodes and will be excluded from consideration, but many are very sensitive to hypoglycemia and keep it under control very well.

The first influx of insulin treated diabetic applicants will indeed probably be older pilots who have developed late diabetes that has progressed to insulin treatment. "There is no person that loves flying half so passionately as the grounded pilot." This small group of pilots will conform to the strictest protocol to be able to regain and retain certification. The insulin treated diabetic who wants to learn to fly will probably come along somewhat later. Most of these individuals have been told for years that there is no possibility that they will ever be able to be certified, so their mindset may have moved them to other avocations. But news travels fast and undoubtedly there will be many whose dream to fly will awaken.

News

MEETING SCHEDULES



45TH INTERNATIONAL CONGRESS OF AVIATION AND SPACE MEDICINE

OSLO, NORWAY

AUGUST 24-28, 1997

For more information, contact
Congress Secretariat, ICASM '97
Plus Convention Norway

P.O. Box 946, N-5001
Bergen, Norway

Phone (47) 55 30 30 76

FAX (47) 55 30 30 32



AEROSPACE MEDICAL ASSOCIATION 68TH ANNUAL SCIENTIFIC MEETING

Chicago, ILMay 11-15, 1997

For more information on the AsMA
meeting, contact:

RUSSELL RAYMAN, M.D.

AsMA

320 S. HENRY STREET
ALEXANDER, VA 22314

(703) 739-2240



FAA AVIATION MEDICAL EXAMINERS (AME) SEMINAR SCHEDULE

Ft. Lauderdale, FLMarch 21-23, 1997
Washington, DCApril 18-20, 1997
Chicago, IL (ASMA)May 12-15, 1997
Okla. City, OKJune 3-6, 1997
Portland, ORJune 20-22, 1997
Albuquerque, NMJuly 11-13, 1997
Okla. City, OKAug. 18-22, 1997
Atlanta, GANov. 7-9, 1997
Okla. City, OKDec. 8-12, 1997

For more information, contact your
Regional Flight Surgeon or:

Mr. Douglas R. Burnett
AAM-400

Aeromedical

Education Division

P.O. Box 25082

Oklahoma City, OK 73125

(405) 954-4830/6214

ANNUAL CAMA MEETING DATES

New Orleans, LASept. 3-6, 1997
Hilton River Front Hotel

Los Angeles, CASept. 2-6, 1998
Hilton Airport Hotel

**CAMA will publish specific
information when details are
available.**

CAMA Headquarters

**P.O. Box 23864
Oklahoma City, OK
73123-2864
(405) 840-0199
FAX (405) 848-1053**

FLYING PHYSICIANS ANNUAL MEETINGS

July 6-11, 1997

Jackson Lake Lodge
Jackson Hole, Wyoming

June 27-July 3, 1998

Samoset Resort
Rockport, Maine

For more information on FPA meetings, contact:

Patricia A. Nodecker, FPA Headquarters
P.O. Box 677427, Orlando, FL 32867

NOTICE

CAMA Board of Trustees' meeting will be held in the Acapulco room of the Hyatt Regency Chicago hotel from 10:00 AM to 12:00 Noon, May 12, 1997. The CAMA luncheon will follow in the Haymarket room at 12:00 Noon.

The CAMA luncheon is open to everyone. Be sure to get your tickets early from the ticket desk at AsMA.

The speaker will be Jon L. Jordan, M.D., JD, Federal Air Surgeon, Federal Aviation Administration.

MAKE YOUR PLANS NOW TO ATTEND