8-2013

Flight Physician - August, 2013

Civil Aviation Medical Association

Flight PHYSICIAN

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In This Issue

President's Message

By Hugh J. O'Neill, M.D., M.H.Sc., D.Av.Med., F.F.O.M.I

Since this is my last message as President of the Civil Aviation Medical Association, I take this opportunity to review the past two years.

We have been successful in reorganizing the Board of Trustees and attracting some vital new members. This should bear fruit over the years as there are already proposals for change that will do only good. One of the most exciting ideas is to create a panel of expert FAA advisors who will be confidentially available to our aviation medical examiner members. This will be achieved through our website.

One of our greatest achievements has been the use of email to do more of our communication. This is mostly due to Sherry Sandoval (President's Award 2012). This is the way of the future and most organizations are either using the Internet for some years or they are converting "snail mail" to instant at no real expense.

Our meetings have been well attended and successful. CAMA Sundays at the Aerospace Medical Association was very good. There were over a hundred attendees with an outstanding international panel of speakers. Jack Hastings

Continued on page 3

President-Elect's Message

Looking Ahead

By Mark Eidson, MD

The Civil Aviation Medical Association is alive and well and the board is working hard to improve all functions and to support the Aviation Medical Examiner. CAMA **is** the "Voice of the AME," and I encourage all AMEs to be a part of this great organization.

The Orlando meeting (September 26-28, 2013) is shaping up to be a success and a great way to get CME, as over 22 hours have been applied for with the AAFP. The Federal Aviation Administration is also approving this meeting for the required AME training. Come join us in Florida.

The CAMA Board recently convened in Chicago and all are working toward making the organization more efficient by using newer technologies and streamlining operations. Despite these efforts and due to the ever-increasing costs of operations, it is felt necessary to raise the annual dues from $100.00 to $125.00. This will keep CAMA going strong into the future and to continue supporting the AME.

I encourage all CAMA members to become active by attending annual meetings, contributing to the "Flight Physician," supporting peer AMEs with their FAA work and inviting AMEs to join. This is all for the good and safety of the aviation public.

Hope to see you in Orlando,

FP

Member 'Gone West'

James Lawrence Harris, M.Ed.
November 5, 1926–June 10, 2013

Tributes...

Jim Harris died June 10, 2013 from complications associated with acute myasthenia gravis. I have since felt a large void with the loss of such a man.

Jim and his wife, Sammie, have had a long-time Weatherford, Texas, connection, which is my hometown. They knew my family and many others locally while in Weatherford, where Jim attended college as a student and later in Parker County as a teacher, coach, and principal.

As a life-long educator, he established the educational programs for the AME in 1960 for the FAA and directed it for 30 years. This, in itself, was a grand feat.

It was in 1982 when I took my initial AME training in Oklahoma City that Jim kindly introduced himself to me and became a mentor for my AME work and associated education. After his retirement from the FAA, he became the executive vice-president for CAMA. It was he who recruited me into CAMA when it was rebuilding, and it was he who helped this organization to grow in members and stature.

Jim was a man who, by example, personified the importance of family, friends, honesty, reverence, and patriotism. For this, he shall continue to be an influence on me and all who knew him.

To Jim on his final landing.

—Mark C. Eidson, M.D.

Mentor, Leader, Friend...

Jim welcomed me as a newborn AME in 1976. He befriended me, as he did with everyone. Within a short time, he introduced me to aeromedical education. My first seminar was in 1981. I was petrified and discouraged, and Jim calmed me. He guided and mentored me until his retirement from the FAA.

When Jim retired, he immediately took on the job of leading CAMA out of its ashes. Jim picked up cardboard file boxes in Illinois, organized a board of directors, became CAMA's Executive Vice President, organized its meetings, nurtured its relationship with the FAA, mentored all its officers and trustees, and all but single-handedly assured CAMA's survival and growth for the next 18 years.

Jim was the first non-physician to become a fellow of the Aerospace Medical Association.

How could one man do all this? My only answer is, "because Jim was Jim." Jim's essence was that of kindness, humility, love of fellow man, boundless desire to help, love of family, and love of faith. That is how he lived his life. That is how he enriched the lives of all who knew him. That is how he made his mark upon this earth.

All of us in CAMA know Jim's wife, Sammy, and daughter Lauranne. We have many happy memories of time spent together. We join them in returning Jim to the hands of his maker. We have loved you, Jim. Godspeed.

—Jack Hastings, M.D.

Colleague

Jim Harris left us to fly to other horizons.

I had the pleasure of knowing Jim for a number of years, and the only thing that I could complain about is that I didn't know him longer. If you never had the opportunity to meet Jim, boy did you miss out!

Jim's dedication to our country and aviation goes way back. As a former teacher and principal, he initiated a program for returning service members to complete their education at both secondary and collegiate level when regulations required them to be working on their degrees or be discharged from the service.

His aviation career began around 1956 when he was selected by the Civil Aeronautics Administration (forerunner of the FAA) to go to Washington, D.C., in a training position. Jim certified me as an AME in 1960!

Since Jim was involved with the inception of the Civil Aerospace Medical Institute way back in 1962, who better to ask to give time line history and development of CAMI's 50 years? On December 11, 2012, he presented a speech at the rededication ceremony in Oklahoma City. His legacy continues on!

Being a man of much energy and enthusiasm, retirement didn't stop Jim. He was the fire under many of your past presidents of CAMA (I for one). He brought us the guidance and knowledge that we have all come to expect. His association and connections with the FAA have helped to bridge many issues brought to light by CAMA members, and thus have aided in getting things done.

He was always present at meetings and seminars with a smile on his face and a pleasant word from his lips, encouraging us all to keep on improving the FAA system. We should all honor the man that brought us to this realm.

Although his legacy lives on, his oversight and presence will be sorely missed!

—James Almand, M.D.

***FLIGHT*PHYSICIAN**

A Publication of the
Civil Aviation Medical
Association (CAMA)

The editors of *Flight*Physician welcome submission of articles, letters to the editor, news bits, interesting aeromedical cases, and photos for publication. Please email text on a computer file (MS Word preferred) to:

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President's Report from page 1

and Russel Rayman organized this event. In particular, we attracted a lecturer from the Republic of China with three other delegates. They all attended the CAMA luncheon. Creating a friendly relationship with this rapidly expanding aviation nation was one of my goals.

The CAMA membership has remained steady for the past two years. Hopefully, this will continue for it is vital if we are to conduct our current, considerable program. To offset our increasing expenditures, the Board has decided to increase the annual subscription from $100 to $125. This should not deter anyone from rejoining. If one person resigns, it takes four others to pay the new fee for us to remain at the old income level!

Each year we lose some very important and pivotal members due to illness or death. This year delivered a bitter blow when our dear friend Jim Harris succumbed to a dreadful illness. He cannot be replaced, and I doubt that I will ever again meet someone with his outstanding qualities. He was always there to give good counsel and cheerful encouragement. I am sure you will all join me in offering his wife and daughter our profound sympathy.

Much of our recent success has been a product of involvement in the educational program for the AMEs who work with the FAA. Thanks to Dr. Fred Tilton and his staff, we are empowered to provide FAA seminar credits. Physicians who are not members of CAMA may also attend our annual scientific meetings. This increased number of attendees offers the opportunity to recruit new members and has been most valuable. Long may this continue. In addition, we provide valuable CME credits through the good work of Mark Eidson. He will take office as President in September, and I look forward to his leadership and offer my strong support.

The financial state of the Association continues to be a source of great concern. We have seen our reserves reduced in the past four years. This cannot continue.

In my opinion, we have failed to grasp this nettle in the sort of comprehensive manner that will ensure our ongoing success. Increasing fees is but a small and inadequate answer. We must rethink how we do business and attract unpaid volunteers to do more work.

Attendance at the meetings is vital for members. This is how one gets personal benefit and a good "bang for your buck." I offer a sincere thanks to our many loyal members from abroad. They contribute annually even when they are unable to attend. Perhaps it is time to have another meeting outside the US. Some of you will remember Austria and Holland?

Regarding meetings, our Executive VP has worked diligently, as always, to provide the structure and support needed for Orlando. Dr. Andrew Miller and his subcommittee have organized an excellent scientific program. It is time to register so don't delay! We will have future meetings in Reno (2014) and Fort Worth (2015). Good deals have been struck with hotels. This will make these meetings very cost effective.

As I prepare to become part of history, I have a deep sense of gratitude to so many CAMA members who gave me support and friendship over the past two years. I hope we will have many more years to enjoy our association.

See you in Orlando?

*F*P

Executive Vice-President's Report

By David P. Millett, M.D.


Dr. Millett

The annual scientific meeting September 26-28, 2013, in Orlando, Florida, is ready to go. The FAA will be there for those who want AME recurrent training credit. CME has been requested, and we anticipate approval for about 20 hours. NOW is the time to register for the meeting!

CAMA was well-represented at the Aerospace Medical Association's annual meeting in May in Chicago. CAMA Sunday was another success, and a group of about 80 enjoyed an excellent international program.

The CAMA luncheon on Monday was sold out with 75 persons in attendance. The presentation by Dr. Courtney Scott of the FAA was outstanding. At the Honors Night Banquet, several CAMA members received recognition.

- CAMA trustee Dr. Russell Rayman received the Louis H. Bauer Founders Award in recognition of his 50 years of excellence in aerospace medicine.
- Dr. Christopher Flynn received the Raymond E. Longacre Award for his contributions to aerospace psychiatry.
- Dr. Harriet Lester received the Marie Marvingt Award for her excellence and innovation in aerospace medicine.
- Dr. Philip Buys was awarded Fellowship in AsMA.

The CAMA information table was a popular site for medical discussions, questions, new member registration, and renewing member dues payment. The CAMA table drew a crowd even after the Chicago fire marshal removed all chairs due to "fire code" regulations.

Our membership continues to grow. We now have 385 members in good standing, including 40 new members in 2013. Let's all do what is necessary to continue to see CAMA grow.

In closing, I would like to add my personal tribute to Jim Harris who passed away on June 10, 2013, after a four-month illness. Besides being a leader of CAMA for 17 years as Executive Vice President, he was the nicest gentleman one could ever meet. I had known Jim since 1978, and we always had a friendly relationship. He certainly helped me many times in FAA and CAMA. It is only fitting that he will live forever in our hearts and our minds.

FP

CAMA Minutes

Chicago Board Meeting
May 13, 2013

Due to the opening ceremony for ASMA, the meeting was delayed. Slowly, a forum was formed as CAMA board members arrived by 10:30 AM.

Present: Hugh O'Neil, James Heins , Andrew Miller, James Carpenter, Jack Hastings, Russell Rayman, Katherine Helleur, Robin Dodge, Gary Sabo, Warren Silberman, John Raniolo, Rodney Williams, David Millett, Petra Illig, Mark Eidson, Gordon Ritter, and Robert Gordon.

Welcome: Hugh O'Neil welcomed all and congratulated those involved with CAMA Sunday. (This is a CAMA sponsored practical aviation/medical program held on Sundays at the annual ASMA conference).

He encouraged email use by all members for communications with CAMA, expressed concerns over financial status of the organization, and encouraged all CAMA members to be more active.

Minutes: A motion to approve the minutes of the last meeting was made by Dr. Silberman and seconded by Dr. Hastings. The minutes were approved by acclamation.

Executive Vice President Report: Dr. Millett gave an update on the upcoming September 26-28th Orlando meeting including meal plans, coffee breaks, shuttle, and Sea World visit arrangements. Dr. Eidson is to finalize CME requirements. The FAA has been disseminating the annual meeting information to all AMEs. The attendance of the Orlando meeting is therefore expected to be 50% non-CAMA members.

Ideas to increase revenues for CAMA were offered such as the design and sales of CAMA T-shirts but no action was made.

A personal get well card to Jim Harris, who is hospitalized, was passed around for all to sign and to be sent to him.

Financial Report: The year to date, itemized, cash flow report was presented and demonstrated a dramatic decrease in most expenses compared to past years. This was mainly due to electronic modernization. Revenues are behind, but are expected to pick up as we move closer to the annual October meeting.

The present bank balance is $34,670.00.

1. Action: Dr. Rayman asked that all action items on the board meeting agenda be shown in **bold.** If these items are not completed, they are to be placed on the next board meeting agenda as old business. All Agreed.

2. Action: All members are encouraged to contact and develop CAMA sponsors. Dr. Carpenter discussed his attempts with a letter to pilots to present to their companies.

Continued →

3. Action: An attempt to have the February board meeting via electronic means was proposed and a motion was made to do so by Dr. Hastings and seconded by Dr. Miller. This was unanimously passed.

4. Action: Annual dues were proposed to be increased from $100.0 to $125.00. This motion was made by Dr. Eidson and seconded by Dr. Williams. This item was passed with Dr. Heins giving a dissenting vote. Dr. Raymond suggested a lead letter to members and will draft such a letter on this matter.

The salary and expenses of the Executive Vice President will be discussed and decisions on such will be made at the October board meeting.

Dr. Illig and Dr. Warren brought up some discussion about a CAMA panel for AMEs to contact with aviation related medical questions. No action was made.

All were adjourned in good order so as to attend the CAMA luncheon.

Respectively submitted,
Dr. Gordon Ritter, Secretary/Treasurer

CAMA Sunday

By Dr. Russell B. Rayman

CAMA Sunday was held May 12, 2013, as usual in conjunction with the annual scientific meeting of the Aerospace Medical Association. The venue was the Sheraton Towers Hotel in Chicago. This year's topic was traumatic brain injury (TBI) organized by Dr. Jack Hastings and Dr. Russell B. Rayman.

Eight speakers were invited from various areas of the globe to discuss TBI with emphasis upon and rationale for aeromedical disposition. These included Drs. Songlin LI (China), David Salisbury (Canada), Dougal Watson (New Zealand), Pooshan Navathe (Australia), Fred Tilton (USA), and Roland Vermieren (Europe).

The session opened with a presentation by Dr. Jack Hastings on the neurological aspects of TBI. He pointed out the difficulty of determining aeromedical disposition because of the frequent disparity between MRI/CT findings and clinical evaluation. For example, a patient could have a relatively benign MRI/CT, yet be significantly symptomatic, or vice versa.

The other participants reviewed policy and its rationale in their respective countries. The session was concluded by Dr. Al Hauser from Columbia, who is a neurologist and internationally recognized authority on TBI. He gave the attendees a unique insight into this illness and provided overall principles to be considered in aeromedical disposition decisions.

Traumatic brain injury is an illness that has and continues to vex AMEs and flight surgeons. CAMA provided an excellent team of speakers to address this challenging problem.

FP

Oh, by the Way…!

Tales of 'Forgetful' Pilots

A **69-year-old white** male pilot recently came into my office for a fairly routine FAA Class 3 medical examination, with a special issuance due to diabetes 2 and coronary heart disease.

All the necessary reports and the authorization letters were presented and in order and he stated that little had changed with his medical conditions. (He unfortunately has had his medical certification delayed, at times, as long as 6 months due to the FAA process, despite his due diligence and stable condition).

On his last flight physical, I noted a positive occult blood on the rectal exam and had advised him to have a follow-up visit with his physician. On this physical exam, I noted a new midline abdominal surgical scar ("Oh, by the way"), and yes, I still do a real physical exam. He stated, "That is where they removed some sort of polyp and a small part of my colon." His physical exam was otherwise stable and unchanged.

On further query, he stated that an oncologist told him that "all was OK" and not wanting any more hassles with the FAA, did not want to mention it. **We had a talk.** I explained that one more special issuance was not a big deal and that I would work with him to facilitate his medical certificate for approval.

I held his certificate until he obtained all the necessary information: colonoscopy reports, history and physicals, surgical reports, pathology reports, lab reports, discharge summary and the oncologist's reports. The diagnosis of moderately differentiated cecal adenocarcinoma, Stage IIA (T3N0M0) was treated by a right colectomy and regional lymphadenectomy. PET staging was negative for metastasis and CEA levels show a favorable prognosis.

The FAA was notified by phone and all was discussed with a certifying physician and approval was given to issue a Class 3 medical certificate limited for a 12-month period. Included with his other required reports, a yearly report from the treating physician concerning his colon cancer is required. This report should include CEA levels, pathology reports, and PET scan reports, if generated, and are to be forwarded to Oklahoma City with his other required reports.

This, "Oh, by the way," demonstrates that pilots should be more open about all their medical problems and that the AME be willing to help, when possible, facilitate medical certification.

—Mark C. Eidson, MD, Editor

From the Editor

There are numerous occasions when the AME requires medical information of a disorder or medications concerning certification of a pilot from a treating physician. Even with specific instructions on what information is needed, the pilot often returns with a scribbled note from the physician stating, "BP is good and is cleared to fly." Unfortunately, this does not work well for the FAA, and probably for good reasons.

Because of this problem, I have, throughout the years, designed fact sheets which are hopefully "doctor proof." These forms are to be completed by the pilot's treating physician or staff and signed, thus providing the FAA the desired information. These will hopefully facilitate a pilot's medical certification. CAMA is an organization for the AME and I would like to share these forms in the *Flight Physician* to help our members.

You may use these, make changes, and let me know what you think.

This one is on Diabetes 2.

Happy Landings,
Dr. Mark

DIABETES-2 FACT SHEET FOR PILOTS

Pilot Name (DOB) _____

Medications (dose and frequency): _____

_____

_____

Medication Side Effects: Yes or No (if **Yes** explain)

Hypoglycemic Episodes: Yes or No (if **Yes** explain)

Presence of Cardiovascular, Neurological, Renal, or Ophthalmological Disease:

Yes or No (if **Yes** explain in detail)

Current Hemoglobin A1C (within 90 days):

Attach any explanations and lab reports with this form.

Physician Name: _____

Signature: _____Date _____

Address: _____

_____

Phone: _____

Forward to: AME Phone:
Fax:

CIVIL AVIATION MEDICAL ASSOCIATION
ANNUAL SCIENTIFIC MEETING
ORLANDO, FLORIDA, SEPTEMBER 26-28, 2013

ATTENDEE NAME: _____

ARE YOU BRINGING A SPOUSE OR A GUEST? YES: _____ **NO:** _____

SPOUSE/GUEST NAME: _____

ADDRESS: _____

CITY: _____ **STATE/PROVINCE:** _____

ZIP: _____ **COUNTRY:** _____ **PHONE:** _____

EMAIL (REQUIRED): _____

PLEASE RESERVE A ROOM: KING: _____ **2 BEDS:** _____
PLANNED ARRIVAL: DATE: _____ **TIME:** _____
PLANNED DEPARTURE: DATE: _____ **TIME:** _____

TO TAKE ADVANTAGE OF THE SPECIAL CAMA ROOM RATE ($145.00 FOR ONE OR TWO PERSONS) AT THE RENAISSANCE ORLANDO SEAWORLD. ALL RESERVATIONS MUST BE RECEIVED AT CAMA HEADQUARTERS NO LATER THAN AUGUST 30, 2013.

TO GUARANTEE HOTEL: NAME ON CREDIT CARD: _____

TYPE OF CREDIT CARD (VISA, MASTER CARD, AMEX, ETC.): _____

CARD NUMBER: _____ **EXPIRATION DATE:** _____

REGISTRATION FEE MAY BE PAID BY CHECK (U.S. DOLLARS) OR CREDIT CARD
(CAMA ACCEPTS VISA OR MASTERCARD ONLY – NO AMERICAN EXPRESS OR DISCOVER)
CREDIT CARD TYPE: VISA: _____ **MASTER CARD:** _____
CREDIT CARD NUMBER: _____
EXPIRATION DATE: _____ **SIGNATURE:** _____
AUTHORIZED CHARGE AMOUNT (U. S. DOLLARS): $ _____
CHECK ENCLOSED (U.S. DOLLARS): CK # _____ **CHECK AMOUNT: $** _____

MEMBER BEFORE AUGUST 30, 2013	**$550.00 U. S. DOLLARS**
MEMBER AFTER AUGUST 30, 2013	**$600.00 U. S. DOLLARS**
SPOUSE/GUEST OF ATTENDEE	**$300.00 U. S. DOLLARS**
NON-MEMBER BEFORE AUGUST 30, 2013	**$675.00 U. S. DOLLARS**
NON-MEMBER AFTER AUGUST 30, 2013	**$725.00 U. S. DOLLARS**

REGISTRATION AND GUEST FEES INCLUDE LUNCHES FOR THURSDAY, FRIDAY, AND SATURDAY AND THE HONORS NIGHT BANQUET ON SATURDAY EVENING.

RETURN TO: (MAY BE RETURNED BY FAX OR EMAIL (civilavmed@aol.com) IF USING CREDIT CARD (VISA OR MASTERCARD ONLY) FOR REGISTRATION.)

CIVIL AVIATION MEDICAL ASSOCIATION PHONE: 770-487-0100
P. O. BOX 2382, PEACHTREE CITY, GA 30269-2382 FAX: 770-487-0080

This meeting is approved for FAA-AME periodic training and for CME for up to 22.25 Prescribed Credits by the AAFP.

CAMA Annual Scientific Meeting
AGENDA

September 25–28, 2013

Wednesday, September 25

7:00—9 p.m. *Hotel Lobby*
Meeting Registration

Thursday, September 26

7—8 a.m. *Foyer*
Meeting Registration

8—8:20 a.m. *Grouper Room*
Welcome and Introductions
Welcome From CAMA
★ Hugh O'Neill, M.D., President, CAMA
★ David P. Millett, M.D., MPH
Executive Vice President, CAMA
Welcome From FAA/CAMI
★ Ms. Jan Wright, FAA Education Division

8:20—10:00 a.m.
AME Program Overview and Performance
★ Brian Pinkston, M.D., MPH
Manager, FAA Education Division

10—10:15 a.m.
Morning Break

10:15—11:00 a.m.
Aeromedical Assessment Updates
From the Federal Air Surgeon
★ Frederick Tilton, M.D., MPH
Federal Air Surgeon, Washington, DC

11:00—12:00 Noon
Medical Legal Issues
★ Amanda K. Bruchs, Esq.
Attorney, Enforcement Division
FAA Office of Chief Counsel

12:00 —1:00 p.m.
Luncheon (Plated Lunch)

1:00 —2:00 p.m.
Cerebral Vascular Disease
★ John Hastings, M.D.
Neurological Medicine, Tulsa, OK

2:00 —3:00 p.m.
AMCD Overview
★ Courtney Scott, D.O., MPH
Manager, FAA Aeromedical Certification

3:00 —3:15 p.m.
Afternoon Break

3:15 —4:00 p.m.
AMCD Overview
★ Courtney Scott, D.O., MPH
Manager, FAA Aeromedical Certification

4:00 —5:00 p.m.
Too Sweet to Fly: Diabetes in the Cockpit
★ James N. Heins, M.D.
Clinical Prof. of Medicine and Endocrinology
Washington U. School Medicine, St. Louis, MO

5:00 p.m.
Adjourn

7:00 —10:00 p.m.
Field Trip: Tour and Dinner, Sharks Underwater Grill, SeaWorld

Friday, September 27

8:00—9:00 a.m. *Grouper Room*
Aerospace Ophthalmology Update –
Selected Topics
★ Douglas J. Ivan, M.D.
Independent Aerospace Ophthalmology and Vision Consultant, San Antonio, TX

9:00—10:00 a.m.
Color Vision Principles, Testing Strategies, and What's New
★ Douglas J. Ivan, M.D.
Independent Aerospace Ophthalmology and Vision Consultant, San Antonio, TX

10:00—10:15 a.m.
Morning Break

10:15—11:00 a.m.
Aeromedical Considerations of Sleep Apnea
★ Anthony Yonkers, M.D.
Department of Otolaryngology
University of Nebraska

11:00—12:00 Noon
Aeromedical Factors Relative to Otolaryngology
★ Anthony Yonkers, M.D.
Department of Otolaryngology
University of Nebraska

12:00 —1:00 p.m.
Luncheon (Plated Lunch)

1:00 —2:00 p.m. *Grouper Room*
HIMS AME Practice
★ Joseph Tordella, D.O.
Behavioral Health of the Palm Beaches, Palm Beach, FL

2:00 —3:00 p.m.
Aviation Psychiatry
★ Jay Weiss, M.D.
Medical Director of the Palmetto Addiction Recovery Center, Rayville, LA

3:00 —3:15 p.m.
Afternoon Break

3:15 —4:00 p.m.
Addictions and Aviation
★ Jay Weiss, M.D.
Medical Director of the Palmetto Addiction Recovery Center, Rayville, LA

4:00 —5:00 p.m.
Bariatric Medicine and Aviation:
A Discussion on Treatment Options for Pilot Weight and Balance Issues
★ David Bryman, D.O.
Bariatric Medicine Specialist, Senior AME
Scottsdale, AZ

5:00 p.m.
Adjourn

Saturday, September 28

8:00—9:00 a.m. *Grouper Room*
Anticoagulants: The Next Generation, An Update for the Aviation Physician

★ Andrew H. Miller, M.D., FACC
Cardiology, The Heart Place, Bedford, TX

9:00—10:00 a.m. *Grouper Room*
Cardiac Devices and Ablation:
Applications for the Flying Patient
★ Michael Craig Delaughter, M.D., FACC
Cardiac Cardiology/Electrophysiology, The Heart Place, Fort Worth, TX

10:00—10:15 a.m.
Morning Break

10:15—11:15 a.m.
Coronary Artery Disease Prevention:
How Do We Keep Our Pilots Healthy?
★ Andrew H. Miller, M.D., FACC
Cardiology, The Heart Place, Bedford, TX

11:15—12:15 p.m.
Infectious Disease and Aviation
★ Richard S. Roth, M.D., Director of Infectious Disease Training, Memorial Health University Medical Center, Savannah, GA

12:15 —1:15 p.m.
Luncheon (Plated Lunch)

1:15 —2:15 p.m. *Grouper Room*
The Aging Aviator:
Dealing With Cognitive Decline
★ Herminio Cuervo, M.D.
Neurology, Lakeland, FL

2:15 to 3:15 p.m.
Respiratory Update:
Toxic Inhalation and Obstruction
★ Clayton T. Cowl, M.D., MS
Division of Pulmonary & Critical Care Medicine. Mayo Clinic (Rochester, MN)

3:15—3:30 p.m. *Grouper Room*
Afternoon Break

3:30—5:00 p.m.
Panel Discussion:
Would You Fly With This Airman?
★ Moderator: Fred Tilton, M.D.
Federal Air Surgeon
Panel Members:
★ John Hastings, M.D, Neurology
★ Andrew H. Miller, M.D., Cardiology
★ James N. Heins, M.D., Endocrinology
★ Clayton T. Cowl, M.D., Pulmonology

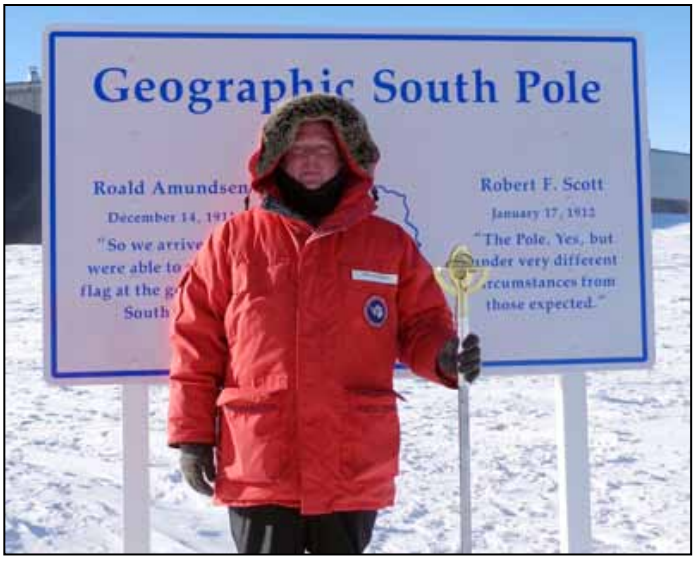
5:00 p.m.
Adjourn

6:30 p.m. Grouper Room
CAMA Honors Night Banquet

This program is approved for FAA-AME training

CONTINUING MEDICAL EDUCATION

This activity, the CAMA Annual Scientific Meeting, with a beginning date of September 26, 2013, has been reviewed and is acceptable for up to 22.25 prescribed credits by the American Academy of Family Physicians.



Coolest Job Ever!

By Sean Roden, M. D.

There a lot of cool jobs people can have, but this summer (Southern Hemisphere) I had what could be considered the coolest job in medicine—literally: working as the expeditionary physician for the Amundsen-Scott South Pole station for the austral summer 2012-2013.

It is a funny twist of events of how I was chosen for the position. I was considering an assignment in Singapore and called up my old alma mater (UTMB) regarding paperwork when the person I was talking to, Dr. McCallum, asked if I knew Scott Parazynski. I said, "Of course." I had been a flight surgeon at NASA and had supported his shuttle mission as an astronaut, on STS 120.

Dr. McCallum continued, "Well he is here in the room with me and he would like to know if you would like to go to Antarctica?" Scott informed me he was now the Director of UTMB's Center for Polar Medical Operations. We visited for a bit and after discussing with my wife, we agreed that this was a once-in-a-lifetime opportunity.

So from October 2012 to February 2013, I served as the expeditionary physician for the Amundsen-Scott South Pole Station, named for the first two expeditions to reach the southernmost point on the planet. The current facility, dedicated in 2008, houses about 170 researchers and support staff during the austral summer and reduces to about 50 who "winter over" during the dark winter months.

Getting There

I left from Houston and had a 3-day orientation in Galveston. There I met my fellow colleague for the summer, Casey Spruill, a nurse practitioner. We then flew from Houston to Sydney then Christ Church, New Zealand. In Christ Church we received our orientation to living in extreme cold, were issued ECW (Extreme Cold Weather) gear, and learned how the Antarctic stations and organizations operate.

The group then boarded a C-17 from the New York Air National Guard that landed on the frozen Ross Sea at the edge of Antarctica taking us to McMurdo Station. There we received our medical orientation and began our acetazolamide regimen as a countermeasure to preventing high altitude illness. The South Pole is at 9,300 feet above sea level with barometric changes causing physiologic altitude at times to reach 12,000 feet above sea level. The next week we boarded a C130 Hercules from the New York Air National Guard, modified to land on snow, and traveled roughly 900 miles from McMurdo Station to the Amundsen- Scott South Pole Station.

Polar Medicine

The South Pole station medical facilities, affectionately called "Club Med," consists of one trauma room and two ward beds. But the facilities are very modern and very well-equipped. We had everything we needed. The winter before, they had had to perform an appendectomy. We had everything you could ask for—everything except support

Continued →

personnel. The medical staff consisted of just my nurse practitioner colleague, Cassie Spruill, and me.

You have to draw your own blood, run the labs, evaluate the labs, position, perform and process, then read all of your own x-rays; you're the pharmacist, the tech, the phlebotomist, etc. For me, growing up in West Texas and wanting to be a rural doctor, it really made me feel like the physician of days past.

I also had the best room with a view. The window in the doctor's office looked out toward the South Poles. There are two poles. One is a ceremonial South Pole. It is a mirrored globe with a red and white striped pole. Surrounding it are the flags representing the nations of the Antarctic treaty. Thirty meters away there is the actual geographic South Pole. Interestingly, the geographic pole migrates about 10 meters a year, so every first day of January there is a ceremony to move the pole to its corrected location and replace the decorative staff head with the new topper that is designed by that year's winter-over team.

The 2012 season was special because it marked the centennial anniversary of Amundsen and Scott's arrival at the South Pole.

We had many duties at the South Pole Station. We supported multiple outposts and a number of away-teams collecting meteorites. We had to maintain all of the AED's in the remote research facilities that were from 1 to 3 kilometers away. It made for long walks in the cold climate but enjoyable to get out from time to time.

My emergency medicine and aerospace training paid off when I was required to stabilize and then air-evacuate a researcher in the remote Transantarctic Mountain Range, about 400 miles from the South Pole Station. We loaded up our medical equipment on a Twin Otter aircraft and flew out to the remote site. Oddly enough, while there, I noticed the name tag of one of the away team members. It happened that he was an astronaut I had worked with from my time as a flight surgeon at NASA. Amazing to run into someone you know in THE most remote location on the planet.

The pilots and crew of Ken Borek Aviation are amazing. Because of the patients' medical issues, I asked if we could fly a low altitude route to avoid potential hypoxia. We took off and they were able to fly in ground effect for nearly a third of the way there. It was amazing to fly that low. We had to enter part of the Transantarctic range to reach McMurdo, so we increased our altitude. The Transantarctic range is an amazing mountain range. Flying through the canyons was spectacular. We reached McMurdo and the patient did well.

Antarctic Adventures

Aside from being prepared to handle any kind of medical or safety emergency, we were responsible for mass casualty training, and performing ultrasounds and physical exams for staff who were going to spend the winter at the South Pole. When you are 900 miles away and potentially days from rescue you have to be prepared and self-sufficient. Again, my aerospace training really paid off.

But life in Antarctica wasn't all work. There was quite a bit of down time, but very little Internet, only about 6 hours a day. Our communication abilities relied on the GOES, TDRS, and Skynet (yes, just like in the movie *Terminator*) satellite systems. We also had Iridium phones when we did not have the ability to acquire signal via satellite.

The station was quite roomy but with tight living quarters. You have your own room but they measure little over 6 feet by 10 feet, similar to what is found on a submarine officers' quarters.

Nevertheless, we kept busy. There were a lot of activities including all kinds of classes: yoga, spin, basketball, salsa dancing, swing dancing, movie nights, and more. Of course, all the typical holiday festivities of the Austral summer, aka northern hemisphere winter holiday season. We were always busy working, training, socializing, etc.

Among the activities available was the annual December 25 "Race Around the World," a 2.8-km trek around the South Pole. A week later, on January 1, six people dared to run the "South Pole Marathon" in frigid minus 28-degree weather with a physiologic altitude of 11,500 feet above sea level. There was luckily only one athlete that needed treatment for frostbite.

The people who live down there are pretty dynamic, they are just an absolute joy to take care of. Mostly their medical issues were insomnia and minor GI complaints. However, I did have to

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Coolest Job from page 11

evacuate a few folks for more serious diseases. With ultrasound I was able to diagnose a retinal detachment and able to get the patient to Christ Church for definitive treatment. Of course, I was there for the summer months when the sun doesn't set below the horizon and aircraft are able to come and go regularly. In the winter, it's a completely different story. You have 9 months of darkness and isolation with no ability to evacuate. With the exception of telemedicine from UTMB, you are on your own.

Tragedy at the South Pole

The station is so well designed and you get so comfortable that you forget that Antarctica is an austere and unforgiving environment. Late one night I was contacted by the communication center to report a possible emergency.

All aircraft fly close routes and have set reporting points on a regular interval. Earlier that day one of our Twin Otters took off and did not make the mandatory way-site communication. Then the ELT (emergency locator transponder) began transmitting. The other Twin Otter crew on station assembled and we scrambled to go rescue the crew. Sadly, weather was suboptimal and we were told to stand down. Two days later, it was discovered that due to weather, the crew had inadvertently flown into the side of Mt. Elizabeth and all souls perished.

The search and rescue team were not able to retrieve the crew—only find the wreckage. Mt. Elizabeth will most likely be their final resting place.

As aviators, we know the risks, but it is never easy. One minute they are with you having lunch and then the next, they are just gone. The entire station mourned, and we were able to achieve some closure by having a formal military-style flag ceremony. During the tribute, our station manager quoted *High Flight* by John Gillespie Magee Jr.

Back to Reality

As my tour started to wind down, I was ready to come home. I missed my family, I had missed Halloween, Dia de los Muertos (All souls day, a favorite holiday of mine), Thanksgiving, Christmas, and even the anniversary of proposing to my wife on Valentine's Day (maybe cliche, but easy to remember!).

Nevertheless, it was kind of a shock coming back. I had been in perpetual daylight for four months, and the humidity was 10 percent. Antarctica is an actual designated desert. I was constantly surrounded by white at the South Pole. Returning to New Zealand, we landed right before nightfall, so seeing darkness for the first time in 4 months was strange, and the humidity and smell of vegetation caught me by surprise. It was an intense sensory experience. The next day I was also struck by the many bright colors, compared to the very white, subtle blue-hued color of the South Pole.

Specially designed head of the staff, marking the centennial anniversary of Amundsen and Scott's expedition to the South Pole.

Though I may not return to the South Pole (I might go back but not sure the wife would tolerate another extended stay…), I am now helping to recruit other physicians to work there. It's the perfect sabbatical, adventure, life experience.

Before I left the South Pole, I received a call from my previous employer, looks like there is a need for NASA flight surgeons to support the International Space Station and a need for doctors to go to Russia to support U.S. crews in space. I was honored to answer the call and I am thrilled to get the opportunity to go back to a prior position and back to being a flight surgeon again.

I will always cherish my time in Antarctica and the time spent with my fellow "polies." Once you have been a part of such an amazing place and people, your perspective is changed and all in a good way. My South Pole colleagues are like family.

Like aviators, there is a bond that only those that have had the experience understand.

. . . . . .

This article is dedicated to the Airmen of Ken Borek Aviation and specifically Perry Andersen, Michael Denton, and Bob Heath the three airman who made the ultimate sacrifice in support of the USAP.

www.borekair.com/memorial/

If you are interested in learning more about the Medical support for Antarctica, you may contact the author at

ssroden@hotmail.com

or the UTMB Center for Polar medical Operations at

http://jobs.utmbhealth.com/go/UTMB-Health-Center-for-Polar-Medical-Operations-Jobs/333829/

FP

All photos courtesy Sean Roden, MD.

Clinical Aerospace Physiology

"The Bends"

Decompression sickness was first identified in caisson workers who were digging the foundations for bridges as well as miners digging coal mines under air-pressurized shafts. These conditions allowed the workers to be exposed to barometric pressures more than double that of sea level. When the workers returned to normal atmospheric pressure, nitrogen gas that had been dissolved in their blood evolved into small bubbles. These bubbles form in the body tissues and may cause a variety of symptoms.

More than 100 years ago, it was known that any time the barometric pressure upon the body was halved, bubbles could evolve and decompression sickness could occur. Within the aviation community, this was first observed in the 1930s when balloon and aircraft records were set at over 30,000 feet of altitude. Decompression sickness became fairly common, and some cases resulted in death.

As nitrogen gas is dissolved in the blood under higher pressures, the body fluids may become saturated. The ability of nitrogen to move in and out of different body tissues varies depending primarily upon the lipid concentration. When the body goes to a lower atmospheric pressure, nitrogen gas will reverse the diffusion and exit the body. However, some tissues allow nitrogen to diffuse out much more slowly and hence are prone to bubble evolution. In effect, since these bubbles do not occur unless barometric pressure is halved, a classic case of altitude decompression sickness should not occur unless the cabin altitude is at 18,000 feet or above, assuming that the air crew started at sea level. Since commercial aircraft cabins are maintained routinely between 5,000 and 8,000 feet altitude equivalent, decompression sickness is not a concern to the average passenger.

However, when passengers have been subjected to below-sea-level pressures within the preceding 24 hours, they may be subject to decompression sickness at much less than 18,000 feet. The Undersea and Hyperbaric Medical Society has recommended that for multi-day unlimited diving, and dives requiring a decompression stop, the surface interval before flying should be 24 hours.

When breathing compressed air and diving, one should recall that 33 feet of sea water is equivalent to 1 atmosphere. Therefore, having descended to anywhere below 33 feet, a scuba diver is required to denitrogenate or decompress prior to surfacing. Most decompression tables, however, are designed for a once-a-day dive with adequate time to decompress prior to the next exposure. Multiple dives in one day may alter the decompression time required. In addition, individuals with higher body-fat percentages require longer decompression times that are built into most tables. Some new sport diving tables take this into account (Guyton, Textbook of Medical Physiology, pp 537).

A combination of diving multiple times and flying shortly after can result in evolution of nitrogen bubbles in the body at relatively low altitudes. There are cases of decompression sickness occurring at less than 1,000 feet above sea level after multiple dives. Other factors which increase susceptibility to decompression sickness include older age, exercise while under pressure, injury and being female.

NOTE: High risk can also result from a single dive, depending on its depth and duration. There are cases of DCS at ground level after a single dive.

Decompression sickness is classified as one of two types. Type I, or the bends, is manifested by pain, usually in a joint. Occasionally, evolution of gas under the skin may present as a dermatitis, pruritus, and a paresthesia. Marbling of the skin is not unusual. However, up to 10% of these patients will progress to circulatory collapse if not treated.

Type II decompression sickness includes central nervous system and vascular manifestations. These may resemble multiple forms of stroke, spinal paralysis, chest pain, dyspnea, myocardial infarction, and circulatory collapse. It is mandatory that type II decompression sickness be treated as a medical emergency.

Initial treatment consists of placing the individual on 100% oxygen, thus altering the tissue pressure gradient and causing more nitrogen to be released from the body. In addition, the patient should be hydrated and placed in a slightly head-down position. This will cause any circulating bubbles to tend to float to the raised portion of the body. Definitive treatment is by recompression in a hyperbaric changer. Type I bends is treated by following Navy table 5, i.e., by compressing the patient to the equivalent of 60 feet of sea water or approximately three atmospheres. The patient is placed on oxygen for 20 minutes, given a five-minute break with air to avoid oxygen toxicity and then repeated. Then 1½ hours of slow decompression, while on 100% oxygen, takes place until the patient is returned to the surface. If this does not relieve the symptoms or if Type II decompression is present, then Navy table 6 is followed which requires over four hours of compressive treatment. Unresolved and life-threatening

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The Bends from page 13

problems must be treated by following Navy table 7, which may exceed two days of compression therapy.

NOTE: Navy table 5 has a high incidence of treatment failures. If symptoms do not begin to improve after 10 minutes on a Navy table 5 profile, treatment should immediately go to a Navy table 6. Although Navy table 5 is used for Type I bends, Navy table 6 is often preferred.

A fairly recent incident involved a commercial freighter flight in which the aircraft could not be pressurized, but the pilot in command elected to climb to over 30,000 feet. He subsequently suffered both a stroke and myocardial infarction and barely lived to tell the tale.

Questions: "The Bends"

1. Decompression sickness, or the bends, can never occur in a commercial aircraft because the cabin altitude does not exceed 8,000 feet above sea level.
 a. True
 b. False

2. Decompression sickness is caused by bubbles forming in body tissues. These bubbles are evolved from a dissolved gas. The gas is:
 a. oxygen
 b. argon
 c. carbon dioxide
 d. nitrogen

3. Pain-only decompression sickness, or bends, causes no long-term problems and does not require treatment.
 a. True
 b. False

4. After multi-day diving or any dive requiring a decompression stop, and individual should wait at least _____ before flying.
 a. No wait is required
 b. 6 hours
 c. 12 hours
 d. 24 hours

5. Snorkeling requires a mandatory time wait between the activity and flying.
 a. True. A minimum of 12 hours.
 b. False. No compressed air is used.

6. An appropriate treatment for Type I (bends) decompression sickness may include:
 a. oxygen
 b. hydration
 c. recompression therapy
 d. all of the above

Answers to Quiz

(1.) b. False
(2.) d. nitrogen
(3.) b. False
(4.) d. 24 hours
(5.) False. No compressed air is used.
(6.) d. all of the above)

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CAMA, working on behalf of physicians engaged in the practice of aviation medicine, aims to...

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- ★ actively enlarge our scientific knowledge;
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- ★ promote professional fellowship among our colleagues from allied scientific disciplines;
- ★ bind together all civil aviation medical examiners into an effective, active medical body to promote aviation safety for the good of the public.

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Future CAMA Annual Meetings

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October 9-11, 2014
Silver Legacy Resort Casino
Reno, Nevada

FAA Aviation Medical Examiner Seminar Schedule

2013

Sep. 26–28	Orlando, Florida	CAMA †
Oct. 28–Nov. 1	Oklahoma City, Oklahoma	Basic
Nov. 15–17	Sacramento, California	CAR

CODES

CAR	Cardiology Theme
OOE	Ophthalmology-Otolaryngology-Endocrinology Theme

†This seminar is being sponsored by the Civil Aviation Medical Association and is sanctioned by the FAA as fulfilling the FAA recertification training requirement. Registration will be through the CAMA Web site:
www.civilavmed.com.

Register for the CAMA annual scientific meeting using the form on page 7. Complete and send it in today to reserve your spot in the Florida sun. Tours are planned , so make plans to take your family with you. Anyone interested in aviation medicine and safety may attend—member or non-member.