

The articles published in this newsletter are presented for informational purposes and topics of discussion and do not necessarily represent the opinions or recommendations of the Civil Aviation Medical Association.

Flight Physician



A publication of the Civil Aviation Medical Association

In this issue:

CAMA News	Page 1
CAMA Sunday/Luncheon	Page 2
CAMA President's Message	Page 3
FAS—SODA—Not Just a Fizzy Drink	Page 5
Circadian Rhythm Disruption And Flying	Page 6
Spatial Disorientation and Vertigo	Page 8
Dr. Daniel Danczyk—A Case Report	Page 10
EVP CAMA Home Office News	Page 19
CAMA Bylaws Proposed Changes	Page 21
Educational Opportunities	Page 29
FAS Pilot Minute Videos	Page 29
AME Seminars	Page 30
AME Minute Files	Page 31
Life, Sustaining, Corporate, and New Members	Page 32
CAMA Dues Form	Page 34
Corporate Member Form	Page 35

Civil Aviation Medical Association (CAMA) Contact Information

Mailing Address:

CAMA
P. O. Box 823177
Dallas, TX 75382

Telephone: 770-487-0100

FAX: 770-487-0080

Email: civilavmed@aol.com

Web Site: www.civilavmed.org

Facebook : Civil Aviation
Medical Association

CAMA News and Annual Scientific Meeting Registration

2022 was a very productive year for CAMA activities, educational programs, and support for Aviation Medical Examiners, and we look forward to an equally exciting 2023! The CAMA web site contains the 2023 individual membership and corporate membership forms on the Members' Lounge Page, available for you to join the organization or to renew your membership (www.civilavmed.org). Printable copies of the membership and corporate forms are on the last two pages of this publication.

Please take a few moments and either complete the dues form online or one of those included in this publication to stay current on your CAMA dues or your corporate dues to remain a CAMA member in good standing. The dues amount remains unchanged in 2023 from that of 2022.

Copies of the September 2022 Annual Scientific Meeting lectures with slides are available on the Podiumcast.com web site (www.podiumcast.com) for \$39.00. This includes every lecture and every slide used, including the keynote presentation on Honors Night.

We have an exciting program lined up for CAMA Sunday during the Aerospace Medical Association (AsMA) 2023 Annual Scientific Meeting May 21-26, 2023, at the Sheraton New Orleans Hotel in New Orleans, Louisiana. The CAMA Sunday program is a free four-hour Aerospace Medicine educational experience that takes place from 08:00 AM to 12:00 Noon on Sunday, May 21, 2023. We have submitted the program for a Continuing Medical Education evaluation rating to the American Association of Family Practitioners (AAFP), and CME certificates will be available for all attendees to the CAMA Sunday Program. The room number has not yet been assigned, but will be available in the AsMA meeting program or on the AsMA app. See Page 2 for description of this program.

On Monday, May 22, 2023, the CAMA Luncheon will take place from 12:00 Noon to 02:00 PM (room number to be announced), and the keynote speaker will be Penny M. Giovanetti, DO, MPH, to discuss the history and ongoing efforts of dealing with mental health issues in airmen. A CME rating has also been requested for this hour long presentation. (See Page 2)

We look forward to having all of you at our 2023 Annual Meeting in Omaha, Nebraska, October 5-7th. Registration for that meeting will open in May, 2023, and the membership will be notified as soon as registration may begin. Our field trip in 2023 will be to the Strategic Air Command (SAC) Museum for a tour of the beautiful airplanes and for a dinner in the atrium under the wings.



Following are the programs for CAMA Sunday and the CAMA Luncheon:

CAMA Sunday, Sunday May 21, 2023, 08:00 AM to 12:15 PM (room number to be announced)

8:00 AM to 09:00 AM - Roger R. Hesselbrock, MD - "Major Updates in FAA Certification of Neurological Conditions: New Conditions AMEs Can Issue (CACIs), AME Assisted Special Issuance AASIs), and Aviation Medical Examiner (AME) Guidance"

09:00 AM to 10:00 AM - Judith A. Frazier, MD, MBA - "FAA Policies and Updates - What's New and Different; Staying Current with Evolving Medical Knowledge and Practices."

10:00 AM to 10:15 AM - Break

10:15 AM to 11:15 AM - Joyce Pastore Fiedler, MD - "Insulin-Treated Diabetes Mellitus; Current Therapies and Continuous Glucose Monitoring Technology Gets More Pilots Back in the Cockpit Safely"

11:15 AM to 12:15 PM - Matthew M. Cooper, MD, MBA, FACS - "Cardiology in the Aviation Environment - Cases, Concepts, and Conundrums"

CAMA Luncheon, Monday May 22, 2023, 12:00 Noon to 02:00 PM (room number to be announced)

Keynote Speaker—Penny M. Giovanetti, DO, MPH, "History and Ongoing Efforts of Dealing with Mental Health Issues in Airmen"

Note: Tickets to the CAMA Luncheon must be purchased **in advance** from the Aerospace Medical Association (AsMA). They cannot be purchased at the door nor directly from CAMA.

The CAMA Sunday program and the CAMA Luncheon keynote presentation will be recorded for purchase by Podiumcast.com, who also records all of the AsMA sessions and presentations. You may purchase the CAMA Sunday/CAMA Luncheon video library during any of the sessions or directly from Podiumcast.com. The cost of this video library is \$39.00. The CAMA table during the AsMA meeting will also have order forms available.

2023-2024 CAMA Officers:

President

David G. Schall, MD, MPH

President-Elect

Leigh L. Speicher, MD, MPH

Immediate Past President

Gerald W. Saboe, DO, MPH

Secretary Treasurer

Petra A. Illig, MD

Executive Vice President

Sherry M. Sandoval

Vice President of Education

Richard Ronan Murphy, MBChB

Vice President for Communications And Representation

Edmond F. Feeks, MD, MPH

Vice President for Management

Gregory A. Pinnell, MD

Parliamentarian

Kris M. Belland, DO, MPH

CAMA Trustees:

Term Expiring 2023:

Steven Altchuler, MD, PhD

Kris M. Belland, DO, MPH

Michael F. Boyer, MD

Christopher F. Flynn, MD

Andrew H. Miller, MD

Term Expiring 2024:

Robert J. Gordon, DO

Richard S. Roth, MD

Sergio B. Seoane, MD

Basil P. Spyropoulos, MD

Rodney E. L. Williams, MBBS

Term Expiring 2025:

Herminio Cuervo-Delgado, MD, MPH

Daniel Danczyk, MD, MPH

Fred A. Furgang, MD

Farhad Sahiar, MD, MS

Alex M. Wolbrink, MD, MS

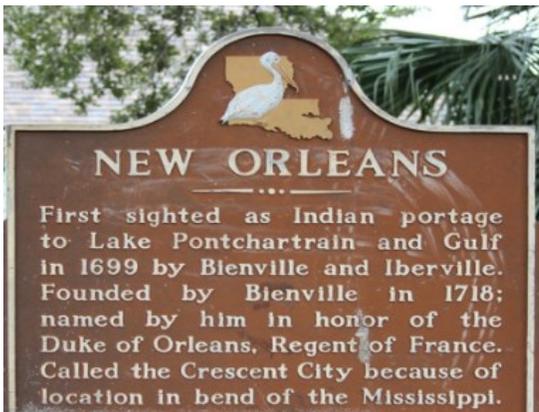
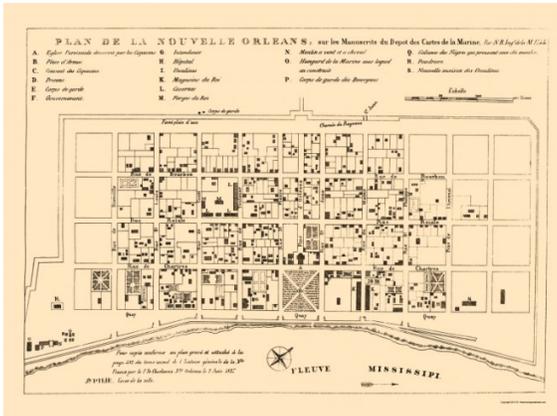
CAMA President's Message



David G. Schall, MD MPH FACS
CAMA President 2021-2023



Tempus Fugit! Time is flying and soon our CAMA Sunday (21 May) at the ASMA meeting in New Orleans will be upon us. I am excited to return to the city of my French ancestors on my Mother's side. One of my Ancestors actually surveyed the original layout of the Vieux Carré (aka the "old square") back in the 1721. My Grandmother actually lived in the Vieux Carré, now known as the French Quarter, and I had the privilege of spending the summer with her, when I was 16 years old back in 1969. For a kid who grew up as a Yankee, it was an eye opening experience. There are so many wonderful things to do and see there and I do hope you can join us.



We have an exciting line-up of speakers for Sunday. There has been a surge in what the Federal Air Certification process.



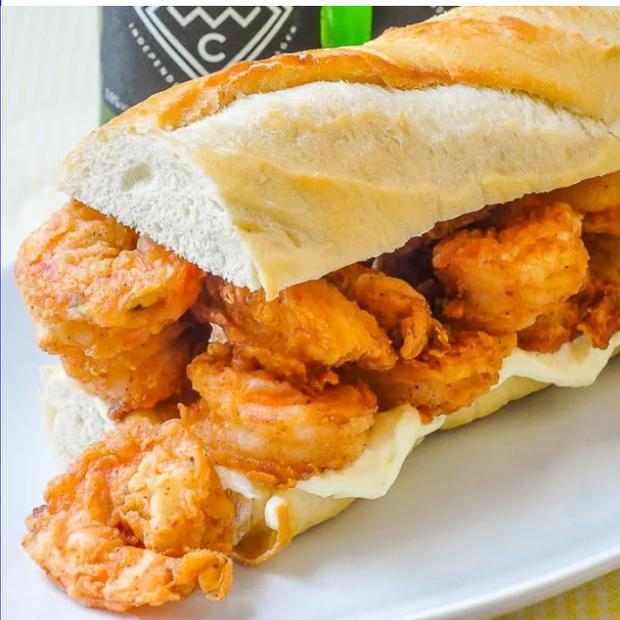
Dr. Judith Frazier will provide an overview of the new OneGuide which is designed to get everyone on the same page when reviewing medical conditions, whether they are Analysts, FAA Physicians or AME's. Easily searchable, the OneGuide will allow updates to be done in just one location. It is continuing to grow daily as more and more conditions are added. Our HQ Federal Air Surgeon Neurology Colleagues have also been equally busy and have provided updates and guidelines for nearly 30 Neurological conditions. Dr. Roger Hesselbrock will be highlighting those updates. Additionally, the management of Insulin Dependent Diabetics is being further refined and Dr. Joyce Pastore will be providing the latest guidance in this challenging new area. Finally, we hope to add a Cardiology update on what's new and allowed in our Flying population. You won't want to miss this. For our Monday Luncheon we look forward to Dr. Penny M. Giovanetti's presentation, "History and Ongoing Efforts of Dealing with Mental Health Issues in Airmen."

So if you will permit me to digress, I'd like to encourage you to take a break and enjoy some delicious Café au lait and Beignets at the World Famous Cafe Du Monde which has been there on the banks of the Mississippi River since the 1860's. If we have time, I'll show you proper way to enjoy a Beignet with your friends as my Uncle taught me.





I would be remiss if I didn't encourage you to try a Po Boy Sandwich, they come with a variety of fillings, the Shrimp Po Boy is one of my favorites. Then finish it off with a delightful Praline. (My Grandmother made the best ones!)



Well I hope I have made you hungry to come to the meeting and look forward to seeing you in the "Big Easy."
Peace & Grace.

SODA—It's Not Just a Fizzy Drink



AEROMEDICAL ADVISORY a checkup on all things aeromedical



By Susan Northrup, MD, MPH
Federal Air Surgeon

Reprinted with FAA permission from FAA Safety Briefing dated March/April 2023

Maintaining the safety of the National Airspace System (NAS) and the public is the fundamental purpose of the FAA. Expanding access for all to the ranks of aviation is also a major goal. To that end, the Office of Aerospace Medicine oversees several processes that allow pilots to get a medical certificate more quickly despite certain disqualifying conditions. We authorize Aviation Medical Examiners (AMEs) to make decisions to speed up the certification process through programs like Conditions AMEs Can Issue (CACI) and AME Assisted Special Issuance (AASI). These successful programs allow more pilots to leave the AME with their certificates in hand. In this article, we'll cover the Statement of Demonstrated Ability (SODA).



So, What's a SODA?

Most individuals qualify for a pilot medical certificate at the time of examination. The majority of those with potentially disqualifying conditions ultimately are also issued a medical, but are required to have a more detailed evaluation. Broadly speaking, there are conditions that typically progress, while others remain relatively static. For the former group, we usually put pilots on a Special Issuance (SI), AASI, or CACI. The particular condition(s) determines the necessary evaluation(s) and frequency. For static conditions, such as an amputation or color deficiency, we generally issue a SODA if the pilot is capable of performing airman duties without endangering public safety. (For color deficiency, we issue a Letter of

Evidence (LoE), equivalent from the pilot's perspective. We are currently reviewing this process though). Unlike an SI or AASI, neither a SODA nor a LoE expires as long as the underlying condition has not adversely changed.

Initial issuance of a SODA or LoE usually includes a medical flight test (MFT) as performed by either an ASI (aviation safety inspector) at a [Flight Standards District Office \(FSDO\)](#) or a designated pilot examiner (DPE). This evaluation typically includes both a ground and airborne evaluation. You will be authorized to take the MFT even if you do not currently qualify for a medical certificate. It is rare, but possible, to authorize a SODA or LoE based on operational experience.

For static conditions, such as an amputation or color deficiency, we generally issue a SODA if the pilot is capable of performing airman duties without endangering public safety.

There are some things you can do to help facilitate the SODA/LoE. Before your examination, contact your AME to determine what information to bring and their availability to help with the process; also, discuss the aircraft you want to use. Most FSDOs can accommodate the typical single-engine, dual-control trainers, but your local FSDO might not be able to accommodate a request for other aircraft types. Come prepared to tell your AME which FSDO you request. We will send that FSDO an authorization for an MFT (as applicable) and courtesy copy you. Please identify your desired FSDO early; the process is delayed when we need to ask. Be aware that the AME will defer your exam and the FAA subsequently will issue a denial pending the outcome of the MFT.

Once you have the SODA, simply present your authorization letter to your AME, and he or she may issue a medical certificate if you are otherwise qualified. This simplifies your certification process going forward. The SODA may have specific limitations that allow the pilot to perform to an acceptable standard and will be issued for a specific class of medical (First, Second, or Third).

How Does This Help You?

Once you have provided any additional information needed, successfully completed your MFT (if required), and been granted a SODA/LoE, you're done. If the condition remains static, simply type your SODA number (N/A for LoE) into MedXPress and present the letter (for both) to the AME when you renew your medical. The FAA and other pilots benefit since this frees up resources to expedite reviews of other examinations. It's a win-win.

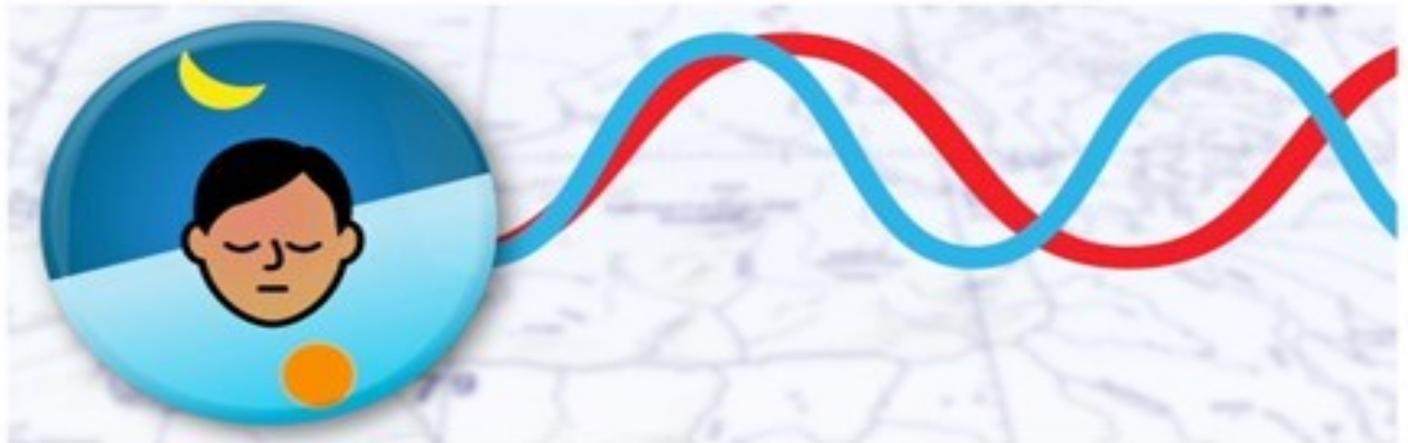
Circadian Rhythm Disruption and Flying

by Dr. Sue Jay, Ph.D., MPH, Research Physiologist

Reprinted with permission from the Federal Air Surgeon's Bulletin, Vol. 57, No. 2, dated December 2022

As commercial pilots and flight crews prepare for the busy holiday travel season and passengers make cross-country or transoceanic flights to see family and friends, now is a good time to review circadian rhythms in relation to air travel and how the successful management of circadian rhythms can help ensure a safe and (hopefully) less stressful travel experience.

and behavioral consequences. **Crossing multiple time zones rapidly during air travel can lead to circadian rhythm disruption (CRD)** – more commonly known as “jet lag”. It is not the distance traveled, but the speed. The time zone changes are too rapid for the body to adapt, and it can take several days for your circadian rhythm to readjust. CRD symptoms typically occur within a day or two of travel



What is a circadian rhythm? How can air travel cause circadian rhythm disruption (CRD) (a.k.a. “jet lag”)? What are the most common symptoms of CRD and how can they negatively affect pilot and flight crew performance? What are some practical strategies to mitigate the effects of CRD?

All in a Day. The circadian rhythm (Latin for circa = “around” and dies = “day”) is the internal biological clock that regulates body functions based on a slightly longer than 24-hour sleep/wake cycle. Many body functions such as temperature, heart rate, blood pressure, and digestive enzymes that regulate appetite fluctuate rhythmically throughout the day. These body functions are synchronized to each other and to the local environment by external cues called zeitgebers (German for “time givers”). Daylight is the strongest zeitgeber. When sunlight shines in your eyes, cells in the retina send signals to a specialized set of “pacemaker” cells deep in the brain that control the circadian rhythm. These pacemaker cells become synchronized to the natural day/night cycle and keep the body’s circadian rhythm “on time” with the local environment. Other zeitgebers include ambient temperature, physical activity, and social contact.

Long Flight + Multiple Time Zones = Circadian Rhythm Disruption. Any time the normal 24-hour circadian rhythm is altered there will be physiological

across at least two time zones and are likely to be more severe and last longer the more time zones crossed, especially when flying in an easterly direction. It is more difficult for your body to adjust to “losing time” when flying east than to “gaining time” when flying west. It usually takes one day to recover for each time zone crossed.

Symptoms of CRD. The most common symptoms of CRD are a disturbed sleep pattern (e.g., difficulty falling and staying asleep, late-night insomnia, early waking) and daytime fatigue with increased sleepiness. CRD-induced fatigue can negatively affect pilot flying skills and flight crew performance and become a serious safety-of-flight issue due to increased reaction time, decreased attention, impaired memory, a lack of focus or indifference to routine and/or critical tasks, and impaired decision-making. Other common CRD symptoms include headaches, decreased concentration and difficulty completing mental tasks, apathy or loss of interest, irritability, mood changes, loss of appetite and/or an “upset” stomach, and a general feeling of discomfort or feeling “unwell”.

Mitigation Strategies for CRD/Jet Lag. Circadian rhythm disruption is inevitable on long cross-country and transoceanic flights across multiple time zones,

(Continued on Page 7)

but there are things you can do to minimize the worse effects of CRD.

- **Go into your flight well-rested.** Sleep well at home before the flight and try to minimize any “sleep debt” (i.e., lack of sleep) prior to your trip. Late nights of stress due to last-minute preparations and packing predispose you to more severe CRD symptoms.

- **Consider the direction of travel and adjust your sleep schedule a few days before your flight.** If flying eastbound, get up one to two hours earlier than normal for several days before your trip and turn on bright lights. This will help advance your internal clock. If flying westbound, delay your bedtime by one or two hours for several days and expose yourself to bright light in the evening to help “push back” your internal clock.

- **Hydrate, hydrate, hydrate.** Drink plenty of water before, during, and after your flight. Dehydration predisposes you to CRD and the dry airplane cabin air can quickly dehydrate you. If you are a passenger, avoid drinking alcohol and caffeinated beverages (e.g., soft drinks, coffee, and tea). Both alcohol and caffeine can increase dehydration and alcohol have the added (undesirable) effect of disrupting the natural sleep cycle.

- **Eat lightly, but strategically.** High-protein foods take longer to digest and keep you awake. Foods high in carbohydrates promote sleepiness (i.e., the sugar-high “crash”) and fatty food make you feel sluggish.

- **For on-duty pilots and flight crew:**

- o Avoid adapting to a local time zone if the layover is short. Try to maintain the circadian rhythm of your “home” time zone.

- o Use caffeine strategically during the flight to counteract circadian rhythm sleepiness. There is a circadian rhythm “dip” (i.e., less energy, tiredness) in the early afternoon and a significant “trough” between 3 and 6 AM.

- o Stay active by conversing with others, stretching/walking around, and taking regular breaks.

- o If you are still sleepy, try to sleep by taking a short nap of no more than 30 minutes (longer than 30 minutes involves deep sleep).

Reset your biological clock and recover by exposure to daylight (especially sunrise) and **staying active on arrival.** Both activities will help your body adjust to the new local time zone. Eating and sleeping are major timekeepers, so it is important to fall into the local schedule and “do as the locals do” on arrival.

At the very least, CRD can make the first few days of a vacation miserable; at worst it can lead to acute or chronic fatigue for pilots and flight crew that is just as debilitating and a safety-of-flight risk as drugs and alcohol. Understanding circadian rhythms, how they can be disrupted by flying, and putting into practice CRD mitigation strategies can make the National Airspace System safer and your next trip more enjoyable.

For more information, see the FAA Brochure "[Circadian Rhythm Disruption and Flying](#)".

Dr. Sue Jay serves as a Physiologist for the Life Sciences Section of the Civil Aerospace Medical Institute (CAMI).

References:

1. *Moskvitch, K. How airline pilots beat jet lag. BBC Future. March 15, 2016. Accessed November 02, 2022. <https://www.bbc.com/future/article/20160314-how-airline-pilots-beat-jet-lag>*

2. *Jet lag disorder. Mayo Clinic. Updated October 02, 2020. Accessed November 02, 2022. <https://www.mayoclinic.org/diseases-conditions/jet-lag/symptoms-causes/syc-20374027>*

3. *Circadian rhythm disruption and flying. Federal Aviation Administration, Civil Aerospace Medical Institute, Aerospace Medical Education Division (AAM-400). Updated November 02, 2022. Accessed November 03, 2022.*

(Continued on Page 12)



www.MedAire.com

The Best Care Possible

The MedAire team is dedicated to building solutions to mitigate risks to crew, passengers and guests. In order for people to receive the best care possible, an integrated solution of Expert Care, Education and Equipment is required.

MedAire pioneered the concept of industry-based comprehensive travel risk mitigation solutions. The expertise developed from providing medical advice and assistance in hundreds of thousands of cases directly influences the content and delivery of the education programs and medical kits we develop for aviation and maritime clients.

Locations:

[AMERICAS +1 480 333 3700](#)

[ASIA PACIFIC +65 6330 9534](#)

[EUROPE +44 1252 517 951](#)

[MIDDLE EAST & AFRICA +971 42 536020](#)

Spatial Disorientation and Vertigo “A Practical Article for your Airmen”

By J.R. Brown

Reprinted with permission from the Federal Air Surgeon's Bulletin, Vol. 57, No. 2, dated December 2022

Not all AMEs or Flight-Docs are pilots/operators. But when the subject of Vertigo and Spatial Disorientation comes up, it can be hard to explain in practical pilot terms. This article was written to be a resource for the doctor and pilot alike to address and understand this menace to safe flight.

The vestibular apparatus of the inner ear contains 3 interconnected semi-circular tubes. Each tube lies at an opposing 90-degree angle from the other. Each tube is filled with endolymph fluid. At the base of each canal is a mound of innervated hair cells. Normally, the hair cells respond to changes in head position or body movement (rotation) along the roll, pitch, and yaw planes; typically felt when we trip and fall.

As the canals move with up or down head motion, this causes the hair cells within the canal to deviate from their normal resting position. For example, when you voluntarily look down or up you move the “pitch” canal of the vestibular apparatus. As the head moves so do the canals, which result in movement, or bending, of the hair cells. The hairs bend because the endolymph fluid surrounding them lags behind the accelerating canal walls. As the hair cells are dragged thru the endolymph, they bend. This sends a signal from the hair cells to the brain indicating that you are either looking up or down.

When there is adequate light for us to see clearly, our visual system overrides the vestibular system in describing our physical orientation. But in low visibility, we transition from using fewer visual cues for orientation in favor of the cues coming from our inner ear. As an example, if while walking in the dark you trip and fall, your body will use the information from the vestibular system to prepare and protect you from injury by bracing and protecting your face and head. In the dynamic environment of aviation, the vestibular system falls short in reporting accurate information pertaining to the orientation of your aircraft. The vestibular apparatus works best in response to short, rapid movements or rotation.

In aviation, a slow and deliberate stimulation is typically applied to the vestibular apparatus. The change in head position doesn't happen as rapidly as in the example of falling. While piloting, head position is chiefly tied to the position of the aircraft. For example, if the pilot pushes the nose of the air-

craft over, it's similar to falling forward. If roll is applied, the aircraft responds similarly to one falling over to one side. A pilot performing these maneuvers in VFR conditions won't feel much sensation because the eyes override the input from the inner ear. But, when flying in IFR conditions, the sensations from the vestibular apparatus become more apparent. When these sensations fool you about your aircraft position, this is called Spatial Disorientation.

In aviation, stimulation of any of the 3 canals can be sustained for long periods of time. For example, a standard rate turn is 3 degrees per second. A 90-degree turn to a new heading will take 30 seconds. A sustained coordinated turn 90 degrees or more can create illusions of aircraft attitude, especially when in limited visibility/IFR.

As a pilot initiates a turn to a new heading while in limited visibility, they will initially feel the turn. They will continue to feel it strongly for about 10 – 15 seconds. That's because the hair cells are bent and send a strong signal to the brain. But, as the turn continues, the pilot will start to “feel” as though they are turning less and less. They may actually feel the aircraft has leveled off. In reality, the aircraft is still turning in the same direction and at a standard rate. The reason for this illusion is that the fluid (which initially had no movement within the canal) is now beginning to move and catch up to the rotational speed of the pilot and aircraft. As the fluid begins to equal the rotational speed of the aircraft, the hair cells are bent less and less. Therefore, they falsely perceive a decrease in the turn of the aircraft.

Eventually, the brain senses the turn has stopped. The pilot who is IFR qualified will look at their instruments and understand what they feel is an illusion and ignore it. They trust their eyes by looking at, and BELIEVING their instruments. An IFR-rated pilot also knows not to move their head – only their eyes. Once they are on the correct heading, the pilot rolls out.

A VFR-qualified pilot would never intentionally fly into IFR conditions. But sometimes an inadequate weather briefing can find a pilot flying into unexpectedly bad weather. They may need to descend, or punch through a little weather, to get back to VFR conditions. VFR pilots finding

(Continued on Page 9)

themselves in the weather soon realize this is a whole new type of flying. They often realize it is beyond their skill set and turn 180 degrees back to the comfort of VFR flying conditions.

Learning about the illusions of Spatial Disorientation (SD), and the associated physiology, is only half the battle. Experience teaches the greatest lesson. There is a way you can experience SD up close and personal without jeopardizing your own safety. It's called the General Aviation Trainer (GAT). This advanced simulator is used to demonstrate SD and vertigo while in a safe simulated flight environment. The GAT will initially put each pilot at a simulated altitude of 5,000 feet AGL and in IFR conditions. The pilot will receive heading instructions and the GAT will respond by spinning around the yaw axis in that direction. As the GAT turns, the pilot's vestibular system will be stimulated accordingly and will mimic the illusions we have just learned about. For more information contact Airmen Education, AAM-400, at 405.954.4837.

Mr. Brown is a training specialist in Airmen Education, with the Civil Aerospace Medical Institute (CAMI).



Notify Pilots When Their Medical is Due!

Fly Direct, Inc.

Providing AME advertising for over 30 years!

New Customer Special: 250 cards with postage for \$250 for a 6-month subscription, or save even more if you sign up for a year of AME advertising up front.



Using sophisticated mapping software in conjunction with the FAA Airmen Database to target expiring airmen in your office area is a great way to boost your airmen clientele. Search by zip code, radius, geographical boundaries, class of airmen, the sky is the limit! Design your own custom card or use one of our awesome photo quality full color glossy card designs with aviation graphics. Volume discounts available!

Advertising@FDmailing.com
Telephone: 843-388-6597



Call us today for your free no-obligation quote!
The postcard size is (5.5" x 4.35")

- Expert management of FAA medical special issuance
- Highly experienced HIMS AME case advocates
- AME practice development and marketing
- In-flight emergency medical support
- Medical/Dental practice emergency medical support
- High Altitude Lab training
- Aircraft medical equipment provisioning
- Aircrew medical training

THE AERO-MEDICAL SPECIALISTS

100% veteran and active-reservist-owned company with more than 130 years combined flight medicine experience



www.airdocs.net 989-245-4494



NOTE: The following research document has been formatted for presentation in this newsletter—if you wish to receive the original document, please contact Sherry Sandoval at civilavmed@aol.com. Dr. Danczyk has given permission for the research study to be released to those who desire to read it in its original form.



Daniel Danczyk, MD, MPH

Dr. Danczyk is one of the Assistant Chief Psychiatrists for the Federal Aviation Administration, Office of Aerospace Medicine. He is a graduate of the United States Military Academy, Michigan State University College of Human Medicine, and University of Minnesota. He holds board certifications in Aerospace Medicine and Psychiatry. Prior to joining the FAA, he worked as a HIMS AME and HIMS Psychiatrist at Mayo Clinic. His occupational work included complex and specialized medical and psychiatric fitness for duty exams for civilian and military pilots, aircrew, physicians, and employees. Dr. Danczyk has also been invited by NASA as an interviewer and evaluator for Astronaut Candidate Selection. An invited speaker nationally and internationally, he loves to teach and educate others. In his military duty, he is a Colonel in the Air National Guard and currently serves as the Chief of Aerospace Medicine within the 133rd Airlift Wing, having been the previous State Air Surgeon for Minnesota. Dr. Danczyk is an instrument-rated private pilot and lives in the Twin Cities with his wife, Georgette, dog, and two cats.

Dear Fellow CAMA Members,

I recently submitted the following draft article for publication in a peer-reviewed medical journal. While not in the hypobaric realm, many of you will recognize the hyperbaric realm has many challenges analogous to human performance and its medical assessment. For example, many dive fitness for duty medical exams assess for medical condition(s) as well as whether the medication(s) used to treat those conditions would be safe in the individual/environment. These two conceptual underpinnings, inherent to whether acute or subtle medical incapacitation risk exists, are also utilized by AMEs for pilot exams. In this article, I used a case report of a recreational diver treated for depression, to highlight the paucity of literature regarding psychotropic usage in divers. However, I also highlighted how this case, along with plenty of anecdotal evidence, should not deter clinicians from using antidepressants in scuba divers. I hope you find this article's content as captivating as I did!

Blue skies and tailwinds,
Dan Danczyk

Scuba diving while taking an antidepressant: A case report of a diver with depression

Daniel A. Danczyk¹; José V. Pardo^{2*}; David F. Colvard³

1 Federal Aviation Administration, Washington, DC 20591

2 Minneapolis VA Health Care System, Minneapolis, MN 55417

3 David F. Colvard, DivePsych.com

*** Corresponding Author:**

José V. Pardo, MD, PhD

Department of Psychiatry, University of Minnesota, Minneapolis, MN 55455; jypardo@umn.edu Cognitive Neuroimaging Unit, Minneapolis VA Health Care System, Minneapolis, MN 55417 Phone: 612-467-2473; email: jose.pardo@va.gov

Key Words: major depression; panic disorder; suicide; psychosis; cerebral metabolism; trimix

Abbreviations: TCA, tricyclic antidepressant; MAOI, monoamine oxidase inhibitor; SSRI, selective serotonin reuptake inhibitor; HPNS, high-pressure neurological syndrome; FSW, feet of standing sea water; DCS, decompression sickness; ATA, atmosphere absolute; MTNR, melatonin receptor; CPAP, Continuous Positive Airway Pressure; NOAA, National Oceanic and Atmospheric Administration; DMO, Diving Medical Officer; OSA, Obstructive Sleep Apnea

Acknowledgments: This material is based upon work supported in part by the Department of Veterans Affairs, Veterans Health Administration, Office of Research and Development, CSRD 1101CX002371.

The views expressed in this article are those of the authors and do not necessarily reflect the position or

(Continued on Page 11)

ABSTRACT

Divers have sought in the oceans food and valuables for centuries. More recently, scuba diving became associated with the military. In the 1950s, scuba diving evolved into a recreational sport for pleasure and leisure. It was greatly popularized after the invention of the "Aqua-Lung" made famous by oceanic explorers like Jacques Cousteau. A wide network of aficionados developed upon the evolution and dissemination of diving technology and the founding of PADI: "The Way the World Learns to Dive." However, an important safety issue often ignored concerns the evaluation of the risk-to-benefit ratio for divers suffering from mental illnesses such as major depression or panic disorder. The prescription of psychoactive medications such as antidepressants or anti-anxiety drugs for scuba divers likewise merits caution. This case report and brief review highlight important considerations for counseling divers and the general public on safety as regards to psychiatric diagnosis and medications during scuba.

INTRODUCTION

Humans have dived in the oceans for food, pearls, and sponges for centuries. However, only recently has diving become popular with the invention of the self-contained underwater breathing apparatus. Humans have also suffered from major depression and melancholia since antiquity. Only in the last century have effective medications become available to treat depression. The safety of divers with depression and other psychiatric disorders and in those taking psychotropic medications such as antidepressants has become a recent concern.

Having clinical or major depression, let alone taking medications to treat it, was until recently a strict contraindication to diving. Furthermore, the issue of antidepressants and depression was largely ignored in published guidance for working divers [1, 2]. Governmental organizations often screened out recruits for military diving who had a history of depression [3]. However, many practicing psychiatrists have come to realize that many recreational divers suffer from depression and concomitantly take antidepressants. This fact prompts a review of the safety issues in this setting.

A conservative estimate of the number of recreational divers in the U.S. is 1.2 million \pm 15% [4]. According to a survey of 3,000 randomly selected members of the Divers Alert Network (DAN), 4.8% of 1,654 respondents (or ~1% of the membership who dive recreationally) reported using antidepressants to treat depression [5]. Taking into account those who dive five or more times per year (about 1.2 million), the number of divers taking antidepressants for depression approximates 57,600--a large group that should at least theoretically seek a medical release before diving.

A review of the medical literature indicates a relative paucity of content regarding antidepressant use in the diver population [2, 6, 7] (see Tables 1 and 2).

It does provide some guidelines generally obvious to most clinicians about psychiatric disorders and symptoms increasing the risk of scuba diving. However, we found no systematic blinded trials of antidepressants in divers.

A review of the medical literature indicates a relative paucity of content regarding antidepressant use in the diver population [2, 6, 7] (see Tables 1 and 2). It does provide some guidelines generally obvious to most clinicians about psychiatric disorders and symptoms increasing the risk of scuba diving. However, we found no systematic blinded trials of antidepressants in divers.

The non-medical dive literature has identified various aspects of diving and mental health symptoms and/or treatments that fit together topically. These topics include psychiatric disorders and comorbid conditions relevant to the diver; overlap between decompression illness (DCI) and mental health symptoms; psychotropic drug use in divers including anxiolytics, stimulants, antidepressants, antipsychotic agents, and substances of abuse; professional and industrial standards for antidepressant and other psychotropic drug use (including environments other than the sea; e.g., hypobaric and hyperbaric); and anecdotal/expert advice on the use of antidepressants and other psychotropics in the diving population.

(Continued on Page 12)

Table 1. Prescribed Antidepressants in Divers

<i>Source</i>	<i>Medication</i>	<i>Indication</i>	<i>Side Effects</i>	<i>Adverse Impact on Diving?</i>
Scuba Diving Magazine	Fluoxetine	Depression, possibly moderate to severe	None	No
Scuba Diving Magazine	TCA	Recurrent Depression w/ Panic Disorder	Tachycardia, dry mouth, jitteriness	Unclear
Scuba Diving Magazine	SSRI	Recurrent Depression w/ Panic Disorder	Dry mouth	No
Live Expert Panel*	<u>Prothiaden (Dosulepin)</u>	Hyperhidrosis	Not reported	Unclear
Psychiatrist-Diver**	TCA's / SSRIs	Anxiety / Panic	Congruent with each class	No

* South Pacific Underwater Medicine Society Annual Meeting, 1996.

** Interview with David F. Colvard, MD

Table 2. Related Research

<i>Type</i>	<i>Subjects</i>	<i>Medication</i>	<i>Results</i>
Dry Hyperbaric	Animal	Lithium	Potentiated HPNS in rats
<u>Normobaric & Dry Hyperbaric</u>	Human	TCA	Physical activity, hyperthermia, hyperbaric O ₂ , all increased serum levels
Dry Hyperbaric	Animal	MAOI	Decreased judgment & muscle coordination at 50 FSW
<u>Normobaric</u>	Human	Citalopram	Performance: No impact on psychomotor; impairment of vigilance
<u>Normobaric</u>	Human	Escitalopram	No impact on psychomotor performance or driving
<u>Normobaric</u>	Human	Mirtazapine	Impaired driving performance
<u>Normobaric</u>	Human	Sertraline	No impairment of vigilance performance

These sources were retrieved via searches in the following sources: PubMed [8]; Psychological Abstracts [9]; Rubicon Research Repository (which includes the Journal of Hyperbaric Medicine and Undersea and Hyperbaric Medicine Journal) [10]; Naval Research Laboratory Ruth H. Hooker Research Library [11]; Divers Alert Network [12];

Civil Aerospace Medical Institute Library [13]; and the Defense Technical Information Center [14]. Unfortunately, many references often lack detailed citations in support of their claims. Nevertheless, this literature provides some interesting preliminary facts, which are further discussed subsequently.

(Continued on Page 13)

Medical and major psychiatric disorders and diving

Divers often conceal medical and psychiatric conditions from diver operators. Approximately 11% of 1,350 respondents were not truthful about preexisting medical conditions before their dive. These problems include the following: cold/flu, 27% ; asthma: 22 %; allergies/sinus problems, 8%; hypertension, 6%; ear infection, 5%; back injury, 4% mental illness, 4%; other, 24% [15].

Major psychiatric disorders and their symptoms can directly affect diver safety. There are no epidemiological studies of the causes of diving accidents. The presence of suicidal ideation regardless of diagnosis is generally considered an absolute contraindication. Although often difficult to prove, there have been many diving accidents under the suspicion of suicide. Active psychosis would also be considered an absolute contraindication given impairment in reality testing and judgment. In mood and anxiety disorders, cognitive dysfunction, global slowing, impaired concentration and judgment arising from many psychiatric disorders and substances of abuse can make scuba particularly dangerous. For example, the onset of a panic attack during a deep sea dive is potentially life-threatening. Physiological changes during diving (e.g., pH, lactate, etc.) can themselves precipitate a panic attack even in healthy subjects. Under duress during panic, a diver may disregard well-known and rehearsed safety procedures. There are also abrupt changes in arterial gases and in gas consumption during an attack. Given the high comorbidity between obstructive sleep apnea (OSA) and depression, there are concerns about altered levels of blood carbon dioxide, arrhythmias, and impaired alertness. Disregarding these risks is potentially dangerous and a consultation with a physician is recommended to fully understand the implications of a dive.

Prescribed psychotropic drug use in divers

Various reports provide examples of psychotropic use in divers. In terms of depression and the use of antidepressants, Scuba Diving Magazine published two individuals diving successfully while on antidepressants [20]. The first used fluoxetine and had no side effects while diving. The second individual successfully titrated from a tricyclic antidepressant (TCA) to a selective serotonin reuptake inhibitor (SSRI). Also, as mentioned above, a survey of recreational divers revealed 4.8% of them dived while using antidepressants to treat depression. The only other reports of psychotropic use in divers includes mention of TCA

use by divers at a live panel discussion (not necessarily specific for depression), as well as the effects of lithium on high pressure nervous syndrome (HPNS) [21]. HPNS is a neuropsychiatric disorder that can occur in depths beyond 100 meters while breathing a helium-oxygen mixture [22]. Regarding lithium, lithium potentiated HPNS in rats but prevented the nitrogen-narcosis-induced loss of righting response [23]. It is hypothesized SSRIs may contribute to serotonin levels potentiating HPNS, due the similarities between serotonin syndrome and HPNS [22,24].

For obvious reasons, another area of psychiatric interest besides depression in divers includes anxiety/panic. One researcher, a prolific diver and psychiatrist with a special interest in in this area, has successfully used TCAs and SSRIs in many of his patients who dive [7,25]. His review of the literature also confirms no published research on antidepressants in the 2-5 ATA pressure range, and he reported no test data on antidepressants from drug companies in diver populations [26].

Hypnotics are a major class of medications prescribed to psychiatric patients and should not be dismissed in the context of diving. The older agents with longer half-lives like many benzodiazepines can cause sedation and motor impairments the following day. Newer non-benzodiazepine agents with shorter half-lives such as zolpidem and eszopiclon may be safer in terms of impaired alertness the following day. However, the FDA recommended in 2013 lowering zolpidem dosages because of residual impairment in alertness the following day that could be dangerous during driving or diving. Whether melatonin receptor agonists (MTNR1, MTNR2; e.g., ramelteon) or orexin receptor antagonists (e.g., suvorexant) offer any benefits in this setting remains unstudied.

Professional and industrial standards

Professional and industrial standards for antidepressant and other psychotropic drug use (including environments other than the sea; e.g., hypobaric and hyperbaric) are more strict given the more extreme environment and consequences. Much of what is found in the literature revolves around industry standards and/or guidance which include standards for fitness for duty regarding the diagnosis of depression, and separately the potential safety issue of being on a psychotropic such as an antidepressant. Clearly, suicidal ideation is a contraindication to diving as there have been many accidents with a high suspicion of suicidal behavior. A chapter in a medicine textbook suggests: “[as] a general rule, patients requiring psychotropic

(Continued on Page 14)

medications should be disqualified, although sport divers have been diving while using [SSRIs] with no apparent problems" [1]. Within the Navy there are two schools of thought: 1) diving supervisor making a decision regarding medication and fitness for duty based upon the Diving Medical Officer's(DMO) recommendation, and 2) DMO's belief that under no circumstances should a diver ever take any kind of drug within 24 hours of diving [27]. Commercial standards are more stringent than recreational standards. For example, NOAA's medical standards list mood disorders as disqualifying conditions when treatment is required beyond 6 months [28]. Finally, in a medical questionnaire for scuba diver training applicants, under the physical exam guidelines for "instructions to the Physician," the use of psychotropic medications under behavioral health is listed as a "relative risk condition" [29].

A physician trained by NOAA in dive medicine, and certified as a PADI instructor, reports a medication such as citalopram is not contraindicated for recreational diving as long as the condition is stable, and the patient has been on it for 90 days or more without major side effects [30].

Other standards in the industry center around the potential side effects of antidepressants on diving safety, and some of these standards are similar in nature to other high-risk environments, such as aviation [31]. This article recommended the possibility of using these medications as maintenance for depression in Canadian aircrew in non-tactical flying personnel after full resolution of depressive symptoms.

Another article on healthy subjects found no impairment in driving performance or psychomotor performance using escitalopram but did find driving performance significantly impaired using mirtazapine [34]. Yet another study found time and dose dependent impairment of vigilance performance with citalopram but not sertraline [35]. Clearly, the neurocognitive effects of antidepressants to treat depression, even in those who do not dive, merit further study.

CASE REPORT

The patient, a 37 year-old Caucasian male U.S. Navy veteran, had recurrent major depressive disorder (MDD) and secondary panic disorder. The past medical history included gastroesophageal reflux disease, obesity (BMI 36.8), hypertension, chronic sinusitis, obstructive sleep apnea, and internal hemorrhoids. The patient denied smoking, using recreational substances, drinking caffeinated beverages, or using alcohol to excess. His career as

a Second-Class Navy Diver began at age 19 years. He completed six naval missions. After discharge, he completed both the Instructor Certification and Trimix (a combination of oxygen, helium, and nitrogen used in deep diving) Certification. His deepest dive was 334 feet using a mixture of 65% helium, 11% oxygen, and 24% nitrogen with a planned narcotic end depth of 100 feet for 12 minutes with routine subsequent ascent stops.

Several medications were used to manage his recurrent MDD (see Table 3 for summary), and these were often discontinued because of the occurrence of known side effects (e.g., nausea, sweating, akathisia, weight gain) unrelated to his diving.

Initially, fluoxetine at 20 mg daily helped the depression symptoms, but he noted dry nasal mucosa making equalizing sinus pressures more difficult during his then deepest dive of 165 feet. He subsequently took paroxetine titrated to 40 mg daily and was able to dive several times to depths of around 200 feet without incident. However, it caused akathisia and was switched to bupropion SA, which after titration to 200 mg twice a day, maintained remission and allowed diving as an instructor to depths of 18 feet and completing his Trimix Certification.

The patient had a recurrence of another major depressive episode the following year just 1-2 months before an international scuba diving trip. Liothyronine (25-50 micrograms daily) was added to his regimen, but it did not help depression symptoms. While taking it he reported the onset of tremor, chest pain, palpitations, and nausea. Cardiac evaluation was negative. Liothyronine was discontinued, and a lithium boost (300 mg twice daily) was initiated. He took the lithium and bupropion while on the international dive trip and reported a sensation of tremulousness without an observable tremor diving to a depth of 110 feet. He did not achieve full resolution of depression symptoms on this combination so was switched to mirtazapine. Although mirtazapine induced a full remission of symptoms, the patient reported increased appetite with a 45 lb (18 kg) weight gain. Nevertheless, mirtazapine caused no overt difficulties when diving to a depth of 150 feet. He was then switched to escitalopram, but this was also discontinued following the onset of a tremor. Venlafaxine was deferred because of hypertension. He was subsequently treated with nefazodone due to concerns about erectile dysfunction.

(Continued on Page 15)

Table 3. Antidepressants Trials by Patient

<i>Medication</i>	<i>Side Effect</i>
Fluoxetine	Dryness
Paroxetine	Akathisia
Bupropion SA	None
Liothyronine (added to bupropion)	Tremor, chest pain, palpitations, nausea
Lithium (added to bupropion)	Sensation of tremor
Mirtazapine	Increased appetite, 45 lb weight gain
Escitalopram	Tremor
Nefazodone	None
[Zolpidem, concomitant to treatment]	None

Of note, the patient took zolpidem 10 mg at bedtime to treat the depression-related insomnia during most of his course. He used CPAP nightly. He was cautioned about the potential for zolpidem to impair performance and to have residual effects on the morning after taking a dose.

Subsequently, the patient changed providers. He was lost to further follow-up.

DISCUSSION

This case highlights the paucity of medical literature in the population of sea divers. There is much anecdotal evidence regarding antidepressant use in recreational diving, and this case provides a detailed example. Unfortunately, little data concerning risks were available. As is typical of patients who dive and seek medical attention for depression, the patient did a “ground trial” of his medications prior to diving. In this case, it became almost expected he would develop side effects; however, these never impacted his ability to dive nor did diving exacerbate his side effects. In only one case, while on fluoxetine, did a side effect make it more challenging to dive because of mucosal dryness impairing his ability to equalize ear pressure.

A limitation of this case presentation includes a focus on recreational diving, because there are no published case reports of commercial divers taking antidepressants—nor would any necessarily be expected given the strict standards for commercial and military diving. As such, it remains unclear under those circumstances, i.e., when the risk of missions is higher or when performance expectations are elevated, how an SSRI such as escitalopram would affect the diving operator. This is important to mention considering the evolving situation when pressure changes and high performance are expected such as in the military environment. As a corollary, for example, Canadian regulations permit non-combat (or non-fighter jet) pilots with controlled depression to fly while taking citalopram. The US Air Force also permits non-pilot

aircrew such as loadmasters to take citalopram, with a waiver granted under similar circumstances (clear diagnosis with well-controlled symptoms and no impairments in duties) [36].

Another limitation of this case is the recall bias inherent in determining memory of specific side effects and especially the time course of a “ground trial” to test the escitalopram prior to his deepest dive. To help mitigate recall bias of side effects, his outpatient medical record was reviewed carefully. However, this does not preclude recall bias of potentially worsening symptoms or side effects while diving especially for the early antidepressant trials. Because the patient never stopped a medication or changed medications because of impact upon his diving, the antidepressant medications did not likely have a major influence on his physical or mental ability to dive.

Given the nature of brain receptor changes in anyone on such medications as escitalopram, a minimal recommendation of medication trial above water should be at least 14 days in duration. While full effects, both in terms of symptom control as well as side effects, would take much longer to establish (4-6 weeks), 14 days would at least allow for assessment of immediate side effects potentially affecting dive ability.

Medications such as fluoxetine with long half-lives may require a longer interval as the drug concentration can build over weeks. The recommendation assumes the individual is asymptomatic or their depression is of a mild degree without impact upon their or another individual's safety or fitness to dive (e.g., cognitive effects of depression affecting concentration or decision-making). This included diving to depths of 334 feet with Trimix gases. Given the fact that the patient suffered from side effects from every antidepressant he tried, it is noteworthy that in only one case did any side effect (dry mouth) affect his diving habits in any way. At one point in time, even for recreational

(Continued on Page 16)

diving, taking antidepressants would have been considered a strict contraindication. However, more recently one could argue pending further research the potential effects of SSRIs themselves (aside from the diagnosis of depression) should not constitute a contraindication to diving.

CONCLUSION

This case supports the cautious use of SSRIs in recreational divers under treatment for mild to moderate depression. It highlights a diver suffering from depression with secondary panic who dives safely while on antidepressants. He had numerous trials of psychotropics, most of them with intolerable side effects unrelated to diving. The notable exception is fluoxetine, which led to xerotic Eustachian tubes. This made it more challenging, but not impossible, to equalize sinus pressures. This case report also highlights the possible safety of diving while on lithium, or at least the combination of lithium and bupropion. However, the potential for encountering dehydration and electrolyte imbalance while diving may elevate lithium to toxic levels, making it a prohibitive prescription. In fact, this individual sensed an unobservable tremor at 150 FSW, which would be of concern if it had adversely influenced fine motor skills involving dive equipment.

We hope this case report will assist mental health providers in understanding it is possible for a diver to safely dive while under medication treatment. It is imperative to have a baseline understanding of the nature of the diving activities as well to assess for suicide risk, presence of psychomotor retardation, or cognitive impairments that would preclude safe diving, and of course to monitor side effects closely.

Given the nature of brain receptor changes, a minimal pre-dive medication trial should be at least 14 days in duration. While full effects would take much longer to establish (4-6 weeks), 14 days would at least allow for assessment of immediate side effects potentially limiting the ability to dive.

Medications such as fluoxetine with long half-lives may require a longer pre-dive trial. Other considerations include past medication sensitivity and potential for low p450 activity. Fourteen days would conservatively allow most medications to reach five half-lives. Also, the pre-dive trial assumes an asymptomatic patient or one with mild depression that does not impact his or her, or another diver's, safety to dive (e.g., cognitive effects of depression affecting concentration or decision-making).

Many practitioners would reasonably hesitate to prescribe antidepressants to recreational divers. However, the literature, albeit very limited, along with this case, suggests that antidepressant

medication for depression are not an absolute contraindication for recreational divers, when taken as prescribed along with the supervision of a physician. A greater potential issue, though more nuanced to adjudicate, concerns the severity of depression, whether left untreated because of diving risks or even if treated. Major depression is associated with a panoply of cognitive deficits that can potentially impact the diver irrespective of medications [37]. In such cases, clinicians should consult experts in mental health of scuba divers. Regardless, further research is needed to better assess risks of major depression and the use of antidepressant medications in divers.

REFERENCES

- [1] Bove AA. Bove and Davis' diving medicine. 4th ed. Philadelphia: Saunders; 2004.
- [2] Querido AL. Diving and antidepressants. *Diving and Hyperbaric Medicine*. 2017 December;47(4):253- 256.
- [3] Wendling J, Elliott D, Nome T. Fitness to dive standards guidelines for medical assessment of working divers [Internet]. Kiel (Germany): European Diving Technology Committee; 2003 Mar [cited 2013 Jun 6]. Available from: <http://www.edtc.org/EDTC-Fitnesstodivestandard-2003.pdf>
- [4] Davison B. How many divers are there, and why you should care [Internet]. *Undercurrent*; 2007 May [cited 2013 Jun 4]. Available from: http://www.undercurrent.org/UCnow/dive_magazine/2007/HowManyDivers200705.html
- [5] Hanson E, Fleisher J, Jackman R, Dovenbarger J, Uguccioni D, Thalmann E, Cudahy E (Naval Submarine Medical Research Laboratory, Groton, CT). Demographics and illness prevalence in recreational scuba divers [Internet]. Durham: Divers Alert Network; [cited 2013 Jun 4]. Available from: http://www.diversalertnetwork.org/medical/articles/Demographics_And_Illness_Prevalnce_in_Recreational_Scuba_Divers
- [6] Campbell E. Psychological issues in diving [Internet]. Durham: Divers Alert Network; [cited 2013 Jun 4]. Available from: http://www.diversalertnetwork.org/medical/articles/Psychological_Issues_in_Diving_
- [7] Colvard, DF. Skype interview. 2013 Mar 7.
- [8] PubMed Health [Internet]. Bethesda (MD): National Library of Medicine (US); [updated 2011 Jan 1]. Available from: <http://www.ncbi.nlm.nih.gov/pubmedhealth/>
- [9] Psychological Abstracts [Internet]. Washington: American Psychological Association; [cited 2013 Feb 14]. Available from: <http://www.apa.org/pubs/databases/psycinfo/index.aspx>
- [10] Rubicon Research Repository [Internet]. Durham: Rubicon Foundation. Available from: <http://archive.rubicon-foundation.org/xmlui/>

(Continued on Page 17)

- [11] Naval Research Laboratory Ruth H. Hooker Research Library via Griffin, J (Technical Information Specialist). Email 2013 Feb 15.
- [12] Divers Alert Network. Available from: <http://www.diversalertnetwork.org/>
- [13] Civil Aerospace Medical Institute Library, Federal Aviation Administration via Anderson, R (Librarian). Email 2013 Feb 14.
- [14] Defense Technical Information Center. Available from: <http://www.dtic.mil/dtic/>
- [15] Permuter, A. Avoiding panic attacks under water. Scuba Diving; 2001 [accessed 2013 Jul 7]. Available from: <http://www.scubadiving.com/training/basic-skills/why-divers-panic>
- [16] Gustafsson, U, and Sjoberg, F. "Serotonin--one possible link between oxygen metabolism and the regulation of blood flow in the brain?" Internat J Microcirculation, Clin Exp 16.3 (1996):143-146.
- [17] Blatteau JE, Maistre S de, Lambrechts K, Abraini J, Risso JJ, Vallee N. Fluoxetine stimulates anti-inflammatory IL-10 cytokine production and attenuates sensory deficits in a rat model of decompression sickness. J Applied Physiol. 2015; 119:1393-9.
- [18] Hopkins RO, Weaver LK. Acute psychosis associated with diving. Undersea Hyperb Med. 2001 Fall; 28 (3):145-8.
- [19] Gowen L. Medications for depression and fitness to dive [Internet]. Durham: Divers Alert Network; 2005 May/Jun [cited 2013 Jun 4]. Available from: http://www.diversalertnetwork.org/medical/articles/Medications_for_Depression_and_Fitness_to_Dive
- [20] Yeager S. Diving with depression [Internet]. Winter Park (FL): Scuba Diving Magazine; 2007 March [cited 2013 Jun 6]. Available from: <http://www.scubadiving.com/diving-depression>
- [21] Meehan C, Williams G, "with audience participation." Diving medical dilemmas [Internet]. Melbourne: South Pacific Underwater Medicine Society Journal; 1996 Dec;26(4) [cited 2013 Jun 4]. 8p. Available from Rubicon Research Repository: http://archive.rubicon-foundation.org/xmlui/bitstream/handle/123456789/6349/SPUMS_V26N4_11.pdf?sequence=1
- [22] Jain KK. High-pressure neurological syndrome (HPNS). Acta Neurol Scand. 1994 Jul;90(1):45-50. [cited 2014 Apr 4]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/7941956>
- [23] Bennett PB, Leventhal BL, Coggin R, Roby J, Racanska L. Lithium effects: protection against nitrogen narcosis, potentiation of HPNS. Undersea Biomed Res. 1980 Mar;7(1):11-6.
- [24] DocVikingo. Depression & diving: part II making the call on recreational diving [Internet]. Huntsville: Scubadoc's Diving Medicine; 2003 Jul/Aug [cited 2013 Feb 28]. 7p. Available from: <http://sciba-doc.com/alertdiver2.html>
- [25] Colvard DF, Colvard LY. A study of panic in recreational scuba divers [Internet]. The Undersea Journal. 2003 First quarter [cited 2013 Jun 6]. Accessed from: http://bellsouthpwp2.net/d/f/dfcolvard/DivePsych/UJ1Q03p040_044_qxd.pdf St
- [26] Colvard, DF. Anxiety, Panic and Psychiatric Problems in Divers [Internet]. 2007 Sep 28 [cited 2013 Apr 10]. Available from: www.divepsych.com/Presentations-pdf/2007Sep28-Psych-SAUHMA%20CME%20Conference%201%20.pdf
- [27] Walsh JM, Should divers use drugs. Bethesda (MD): Naval Medical Research Institute; May 1979. 8p. Report No.: NMRI-79-13. Accession No. (DTIC): ADA072602.
- [28] Diving Medical Standards and Procedures Manual [Internet]. Seattle: National Oceanic and Atmospheric Administration Dive Program; 2010 Aug 1 [cited 2013 Jun 4]. 70p. Available from: http://www.ndc.noaa.gov/pdfs/NOAA_Medical_Standards_Procedures_Manual.pdf
- [29] Guidelines for Recreational Scuba Diver's Physical Examination [Internet]. Recreational Scuba Training Council; revised 2001 Sep [cited 2013 Jun 6]. Available from: http://www.exploreventures.com/pdf/medical_statement.pdf
- [30] Pinkston BS. Email. 2013 Feb 16.
- [31] Ireland R. Pharmacologic considerations for serotonin reuptake inhibitor use by aviators. Aviat Space Environ Med 2002; 73: 421-9.
- [32] Peng H, Cheung B. A review on pharmacokinetic modeling and the effects of environmental stressors on pharmacokinetics for operational medicine: operational pharmacokinetics [Internet]. Toronto: Defence Research and Development Canada; 2009 Sep [cited 2013 Jun 6]. 124p. Available from: <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA509469>
- [33] Paul MA, Gray GW, Love RJ, Lange M. SSRI effects on psychomotor performance: Assessment of citalopram and escitalopram on normal subjects. Aviat Space Environ Med 2007; 78:693-7.
- [34] Wingen M, Bothmer J, Langer S, Ramaekers JG. Actual driving performance and psychomotor function in healthy subjects after acute and subchronic treatment with escitalopram, mirtazapine, and placebo: a crossover trial. J Clin Psychiatry. 2005 Apr;66(4):436-43.
- [35] Riedel WJ, Eikmans K, Heldens A, Schmitt JA. Specific serotonergic reuptake inhibition impairs vigilance performance acutely and after subchronic treatment. J Psychopharmacol 2005; 19:12-20.
- [36] Air Force Waiver Guide, Last Update: 28 May 2013. United States Air Force. Accessed from: <http://www.wpafb.af.mil/shared/media/document/AFD-130118-045.pdf>
- [37] Gorman D. Fitness for diving a review of the critical issues [Internet]. Melbourne: South Pacific

(Continued on Page 18)

- Underwater Medicine Society Journal; 1994 Mar;24 (1) [cited 2013 Jun 4]. 3p. Available from Rubicon Research Repository: http://archive.rubicon-foundation.org/xmlui/bitstream/handle/123456789/7618/SPUMS_V24N1_2.pdf?sequence=1
- [38] Walsh JM, Should divers use drugs. Bethesda (MD): Naval Medical Research Institute; May 1979. 8p. Report No.: NMRI-79-13. Accession No. (DTIC): ADA072602.
- [39] Diving Medical Standards and Procedures Manual [Internet]. Seattle: National Oceanic and Atmospheric Administration Dive Program; 2010 Aug 1 [cited 2013 Jun 4]. 70p. Available from: http://www.ndc.noaa.gov/pdfs/NOAA_Medical_Standards_Procedures_Manual.pdf
- [40] Guidelines for Recreational Scuba Diver's Physical Examination [Internet]. Recreational Scuba Training Council; revised 2001 Sep [cited 2013 Jun 6]. Available from: http://www.exploreventures.com/pdf/medical_statement.pdf
- [41] Pinkston BS. Email. 2013 Feb 16.
- [42] Ireland R. Pharmacologic considerations for serotonin reuptake inhibitor use by aviators. Aviat Space Environ Med 2002; 73: 421-9.
- [43] Peng H, Cheung B. A review on pharmacokinetic modeling and the effects of environmental stressors on pharmacokinetics for operational medicine: operational pharmacokinetics [Internet]. Toronto: Defence Research and Development Canada; 2009 Sep [cited 2013 Jun 6]. 124p. Available from: <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA509469>
- [44] Paul MA, Gray GW, Love RJ, Lange M. SSRI effects on psychomotor performance: assessment of citalopram and escitalopram on normal subjects. Aviat Space Environ Med 2007; 78:693-7.
- [45] Wingen M, Bothmer J, Langer S, Ramaekers JG. Actual driving performance and psychomotor function in healthy subjects after acute and subchronic treatment with escitalopram, mirtazapine, and placebo: a crossover trial. J Clin Psychiatry. 2005 Apr;66(4):436-43.
- [46] Riedel WJ, Eikmans K, Heldens A, Schmitt JA. Specific serotonergic reuptake inhibition impairs vigilance performance acutely and after subchronic treatment. J Psychopharmacol 2005; 19:12-20.
- [47] Air Force Waiver Guide, Last Update: 28 May 2013. United States Air Force. Accessed from: <http://www.wpafb.af.mil/shared/media/document/AFD-130118-045.pdf>
- [48] Gorman D. Fitness for diving a review of the critical issues [Internet]. Melbourne: South Pacific Underwater Medicine Society Journal; 1994 Mar;24 (1) [cited 2013 Jun 4]. 3p. Available from Rubicon Research Repository: http://archive.rubicon-foundation.org/xmlui/bitstream/handle/123456789/7618/SPUMS_V24N1_2.pdf?sequence=1



 **WINGMAN MED**
We keep you flying!

WINGMANMED.COM

- Increase your reach and attract more pilots with our Premier AME Directory at www.pilotdoctors.com
- Issue more certificates and shorten deferment timelines with our case management for new SI, AASI & CACI

CONTACT@WINGMANMED.COM | 305.504.2934

Home Office Activities and Information



*Sherry Sandoval
CAMA Executive Vice President*

Dues and Membership 2023

The 2023 CAMA Membership Dues rate remains at \$150.00 for a Regular membership, \$300.00 for a Sustaining membership, \$50.00 for a Retiree/Student membership, \$1500.00 for a Life Membership, and \$350.00 for a Corporate Membership. Please take a few moments and pay your 2023 CAMA dues.

Most individuals paying dues (or registering to attend the annual meeting) are using the links on the CAMA website to complete the necessary forms and to make their payments. The CAMA website has advanced security, easy access to news and information, and links to important FAA information and web sites, such as the AME Guide, the AME Minute, FAA AME training seminar schedule, the Federal Air Surgeon Bulletin and the Pilot Minute files. These important links are on the landing page of the CAMA website at www.civilavmed.org.

The online dues payment forms, for both individual and corporate memberships, are located on the Members' Lounge page. You may also download and print regular copies of individual and corporate dues forms from that same page for emailing, faxing, or sending via the post office, along with your preferred form of payment, for home office processing.

The pay online function is a wonderful time-saving element of the redesigned CAMA website that provides both convenience and security for CAMA members to transact business with CAMA from anywhere without needing access to a printer or FAX machine.

Of course, you may continue to join CAMA, renew your membership, or register to attend the Annual Scientific Meeting via email, fax, or regular post office mail using downloaded or printed versions from the website or forms from the newsletter, "The Flight Physician."

Call the CAMA Home Office at 770-487-0100 or email civilavmed@aol.com if you have questions or experience problems.

CAMA Executive Board Meeting

On Saturday, February 11, 2023, the CAMA Executive Board conducted the CAMA Winter Board Meeting via Zoom. It was a very productive session with the board members and trustees setting forth the CAMA activities, educational opportunities, and goals for the year. There are a number of committees that members may join to help guide and set goals for the organization during the year and to use as a platform to put forth new ideas on any number of subjects. CAMA web site, on the Officer page, has a listing of available committees for which one may volunteer. Please consider helping us to guide the organization by joining a committee. Contact the Home Office and we will put you in touch with the Committee Chair of your choice.

2023 Annual Scientific Meeting in Omaha, Nebraska

The DoubleTree Hotel in downtown Omaha has been selected as the site of the 2023 annual meeting, and the Strategic Air Command (SAC) Museum will be the venue for our Thursday field trip and catered dinner. The beautiful airplanes in the museum were simply impossible to resist, and attendees in 2023 will certainly enjoy walking among those amazing aircraft before dinner in the Atrium!

The DoubleTree has wonderful meeting space, and they have promised that the room rates will be at the Federal Government per diem rate for Omaha in 2023 (currently \$110). The Old Market shopping and restaurant district is within a short walking district of the hotel, as is the river event area currently under development (scheduled for completion in early 2023, with shops, museums, and other interesting venues).

The dates for the 2023 Annual Scientific Meeting are October 5-7, 2023, with the CAMA Executive Board Meeting taking place on Wednesday afternoon of October 4th. Please reserve those dates on your calendar and plan to join us for this event.

CAMA Logo

You may have noticed that the CAMA logo has changed slightly and is now colorized. As we were designing the award plaque for the new John D. Hastings Award to be presented in May during the AsMA Annual Scientific Meeting, it was noticed that

(Continued on Page 20)

there appeared to be several variations being used for awards, on correspondence, and in publications. Dr. Gary Saboe investigated back in CAMA historical files and documents and found that somewhere along the line between about 2009 and 2011, the CAMA logo got changed to a more “clipped” style without the earlier caduceus and some of the laurel leaf/olive branch designs of the original versions.

We reached out to the awards company to ascertain which versions of our CAMA logo they might have in their records and discovered to our dismay that in about 2019, they had a data breach and were hacked, losing many of their historical records and designs, including prior versions of the CAMA logo.

There is no information in old CAMA publications or board minutes concerning who made the logo change, who authorized the change, and how the clipped design was arrived upon. Without that information to support the change, the CAMA Executive Board decided several things:

- (1) An Ad Hoc Committee was established to design a new and more modern CAMA logo to be used in the future. The current one is very detailed and is a little old-fashioned for an active organization such as CAMA
- (2) We should go back and use the last “official” CAMA logo of record for this year’s publications and awards
- (3) The awards company we have been using for many years would be asked to “recreate” the official CAMA logo in both black and white and in color, which has been accomplished.

It has been very interesting to see how many versions of the CAMA logo have been used over the past 68 years since CAMA was established under its current name in 1955. Dr. Saboe, using photos of old awards and publications from the CAMA archives, created a very detailed library of images. Another discovery involved the misspelling of the word “publico” as “publica” around the time that the clipped version of the logo came into use (at some point prior to 2011). We have had the awards company correct the spelling of the Latin phrase “Pro Bono Publico” on the recreated logo.

Following are some of those images, beginning with the oldest 1955 logo and ending with the newly recreated CAMA logo in both color, black and white, and solid blue imaging.

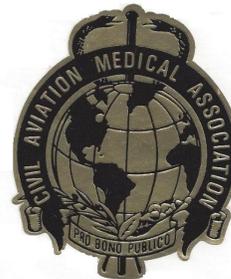
If anyone has ideas on how the CAMA logo should be modified and updated for the future, please contact the Home Office or Dr. Gary Saboe.



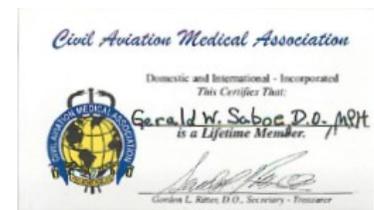
The original 1955 CAMA seal/emblem as designed by the first president of CAMA, Gerald “Jerry” Backenstoe, MD, unanimously adopted by the Board of Trustees, June 6, 1955



Used in the 1990's and earlier and on 2011 Annual Meeting Program



Sticker from 2009 or earlier



Membership Card 2009



Used from at least 2011 on bags, in newsletters, and on awards



2023 recreated last approved version of logo in color



2023 recreated last approved version of logo in black and white and in blue



A very interesting history! If you have any historical information regarding the progression and changes of the CAMA logo, please let the Home Office know.

On the following pages are proposed changes to the CAMA Bylaws, approved by the CAMA Executive Board at the Winter Executive Board meeting February 11, 2023. These changes will be presented to the CAMA membership for a vote during the 2023 CAMA Annual Scientific Meeting in Omaha, Nebraska, October 5-7, 2023. Those present at the Honors Night Banquet and Awards Ceremony on Friday, October 6, 2023, will constitute a quorum of the CAMA membership and will be asked to vote on these Bylaws changes at that time. The proposed changes are shown in red. Please read these proposed changes and let the CAMA Home Office know if you have any objections or suggestions.

December 26, 2022 ALL PROPOSED CHANGES TO:

BYLAWS

of the

CIVIL AVIATION MEDICAL ASSOCIATION
(Revised Sep 23, 2022)

ARTICLE I. NAME AND SEAL

Section 1. The name of this Association shall be the Civil Aviation Medical Association (CAMA).

Section 2. The seal of the Association shall be an appropriate design including the name of the Association. A motto may also be incorporated in the design at the discretion of the Executive Board.

ARTICLE II. MISSION

Section 1. CAMA is an organization dedicated to civil aviation [aerospace] safety. CAMA, working on behalf of physicians engaged in the practice of aviation [aerospace] medicine and other professionals in the field of civil aviation [aerospace] safety, aims to achieve the following objectives:

- (A) To promote the best methodology for the assessment of mental and physical requirements of civil aviators [, aerospace operators, and space flight participants].
- (B) To actively enlarge our scientific knowledge.
- (C) To advocate, through continuing education, both basic and advanced civil aeromedical [aerospace medical] knowledge.
- (D) To promote professional fellowship among our colleagues from allied scientific disciplines.
- (E) To bind together all civil aviation medical examiners into an effective, active medical body to promote aviation [and spaceflight] safety for the good of the public.

ARTICLE III. FUNDS

Section 1. The funds of this Association shall be used to defray the operating expenses of the Association and for the purposes and objectives heretofore set forth.

Section 2. No part of the funds of the Association shall be used to benefit any individual, except by awards or scholarships.

Section 3. Subject to limitations of the Charter and these Bylaws, the funds of the Association shall be kept or dispersed on the authority of the Executive Board.

ARTICLE IV. ETHICS

Section 1. The code of ethics of the Association, as stated below, shall apply to all Association members. Members shall

- (A) accord the highest priority to the health and safety of those who participate in the civil aviation [aerospace] environment.
- (B) uphold the highest standards of professionalism and perform honestly in all personal and professional interactions.
- (C) strive to expand and disseminate knowledge of civil aviation [aerospace] medicine and its practice to the general public, colleagues, aviation [aerospace] industry, and patients.
- (D) respect, at all times, the laws of the land and shall always function, both professionally and personally, within those laws.
- (E) continue to study, to apply, and advance scientific knowledge and make relevant information available to patients, colleagues, and the general public.
- (F) respect and guard the privacy of patients and other personal and professional associates.
- (G) always respect and adhere to the Bylaws of this Association.

ARTICLE V. ADMINISTRATION AND OFFICE

Section 1. The principal office of the Association shall be located at the office of the Executive Vice President (EVP), or at such other place as the Executive Board shall establish.

Section 2. The EVP, appointed by the Executive Board, shall serve as the general manager of the Association.

ARTICLE VI. MEMBERSHIP

Section 1. Those members in good standing at the enactment of these Bylaws and all members accepted in accordance with the Bylaws of this Association shall comprise the membership.

Section 2. There shall be the following categories of membership:

- (A) Active
- (B) Retired Active
- (C) Life
- (D) Student
- (E) Sustaining
- (F) Fellow
- (G) Honorary Life
- (H) Corporate Sponsor
- (I) Emeritus

Section 3. Qualification for each category of membership shall be established in the Bylaws.

ARTICLE VII. MEETINGS

Section 1. A scientific meeting of the Association shall be held annually in conjunction with the annual general business meeting of the Association at a time and place designated by the Executive Board.

Section 2. An annual luncheon meeting of the Association shall be held in conjunction with the scientific meeting of the Aerospace Medical Association (AsMA).

Section 3. Additional scientific meetings may be scheduled at the discretion of the Executive Board.

Section 4. The Executive Board shall regularly meet two times a year as follows:

- (A) Once during the annual CAMA Scientific Meeting.

(B) Once each winter at a date and location to be established yearly by the President and the EVP.

(C) EB meetings may be conducted electronically.

Section 5. Special meetings of the Executive Board may be called by the President or by joint action of any 5 trustees.

Section 6. A quorum, consisting of a simple majority of the Executive Board, may conduct any and all business of the Association, except as otherwise provided for in the Bylaws.

Section 7. Fifty (50) members shall constitute a quorum at the Annual Business Meeting.

Section 8. Each Executive Board member shall be given advance notice, in writing, at least one month prior to every regular or called meeting of the Board.

Section 9. Meetings will be conducted in accordance with Robert's Rules of Order. Appointment of a parliamentarian will be at the discretion of the President.

ARTICLE VIII. OFFICERS

Section 1. The Officers of the Association shall be:

- A. President
- B. Immediate Past President
- C. President-Elect
- D. Secretary-Treasurer
- E. Vice President of Education
- F. Vice President of Management and Planning
- G. Vice President of Representation, and Communications.

The EVP will be an ex officio member of the EB and EC

ARTICLE IX. EXECUTIVE BOARD (EB) AND EXECUTIVE COMMITTEE (EC)

Section 1. The EB shall consist of the Officers and Trustees as delineated herein and in the Bylaws. The EB shall be the policy setting and legislative body of the Association. The EVP will be an ex-officio member of the EB.

Section 2. The EC shall consist of the President, Immediate Past- President, President-Elect, Secretary-Treasurer, and the three elected Vice Presidents (VP for Management and Planning, VP for Education, VP for Representation and Communications). The EVP will be an ex officio member of the EC.

ARTICLE X. AMENDMENT OF THE BYLAWS

Section 1. The Bylaws may be amended by a 2/3 vote of the members present at the annual CAMA general business meeting. Written notice of all proposed amendments shall be sent to all CAMA members at least 30 days before the meeting.

Section 2. Proposed amendments will first be reviewed by the EB at the winter meeting (or electronically). A majority vote of EB members present is required for approval to present the proposed amendment(s) to the membership at the general business meeting. Written notice of those proposed amendments shall be sent to each EB member at least 30 days before the winter meeting.

ARTICLE XI. MEMBERSHIP

Section 1. Category of Membership

- (A) Active membership shall include any of the following acceptable candidates who are elected to membership:

1. Duly licensed physicians in good standing with their respective medical societies who are interested in civil aviation [and civil spaceflight].
 2. Other individuals who are active in civil aviation [and civil spaceflight] and who are interested in aviation [aerospace] medicine and flight safety.
- (B) Retired active members shall be those members who retire from practice but wish to maintain affiliation with CAMA. They shall pay reduced dues as established by the EB, shall have voice and vote, but may not hold office.
- (C) Life members shall be those active members who elect to pay a one-time lump sum specified by the EB for lifetime dues.
- (D) Student members shall be student physicians who are interested in civil aviation [or civil spaceflight] or other individuals who are active in civil aviation [or civil spaceflight] and who are full time students in an accredited college or university. They shall pay reduced dues as determined by the EB, shall have voice and vote, but may not hold office.
- (E) Sustaining members shall be those active members who contribute an annual sum, established by the EB, to support the activities of the Association.
- (F) Fellows. The Membership Committee will recommend to the Executive Board candidates for Fellow. Fellow candidates must be CAMA members who have made outstanding contributions to CAMA and will be elected at the CAMA Annual Scientific Meeting by the Executive Board by a 2/3 majority of those in attendance.
1. A candidate for Fellowship must:
 - a. be a CAMA member in good standing for a minimum of 5 consecutive years prior to election.
 - b. be a regular, interested participant in CAMA as demonstrated by frequent meeting attendance, submission of articles to the CAMA publications, committee participation, etc.
 - c. have an active interest in civil aviation [aerospace] medicine as demonstrated by medical practice and participation in aviation [aerospace] medical activities.
 - d. be well respected by peers in national and/or international aviation [aerospace] medical organizations.
 2. Priority will be given to those CAMA members who have made significant contributions to civil aviation [aerospace] medicine.
- (G) Honorary life members shall be those individuals elected by the EB and honored for their contribution to the Association, to aviation [aerospace] medicine, to flight safety, or to humanity. They shall have all the rights of active membership, but shall not be assessed dues.
- (H) Corporate sponsors shall be those organizations who, with the approval of the EB, contribute dues set by the Board to further the purpose and objectives of the Association. Each corporate sponsor shall be invited to name a non-voting representative to the EB.
- (I) Emeritus members. On the recommendation of the President, the EB may appoint up to three distinguished, long-serving members of CAMA as Emeritus members of the EB. They will act in an advisory capacity only. They will attend meetings and serve at their own discretion. Emeritus members are appointed each year by the EB.

Section 2. Membership Application Procedures

- (A) Applications for Active membership shall be submitted to the EVP with payment for one year's dues. If all qualifications are met and dues are paid, the EVP shall enroll the applicant as a member.
- (B) Active members may, at their discretion, convert their membership status to Retired, Life, or Sustaining membership by notifying the EVP of their intention, and paying the appropriate dues.

- (C) Applicants for Corporate membership shall inform the EVP of their desire to join CAMA and, once it is determined by that officer through consultation with the Vice President for Management and Planning that their company meets the criteria established by the EB, shall be enrolled upon payment of the appropriate dues.
- (D) Selection of Fellows and Honorary Life Members shall be accomplished through a standing Membership Committee, appointed by the Vice President for Management and Planning. This Committee shall be comprised of no fewer than 3 and no more than 5 CAMA members and must include at least one Fellow.

1. Responsibilities

- a. The Membership Committee shall survey the CAMA membership roster at least once each year to identify members who meet the criteria for recognition as Fellows, and forward their names via the Vice President for Management and Planning to the EB at the regularly scheduled Board meeting held in conjunction with the annual CAMA Scientific Meeting. Individual CAMA members may also nominate other members of CAMA for Fellow by forwarding the name of the nominee to the Membership Committee. Subject to a favorable vote by the Membership Committee, their names shall be included with the committee chosen candidates. The EB shall vote a slate of new Fellows to that membership category yearly at the Annual Scientific Meeting. A 2/3 majority of the Board members present at the meeting shall be required to approve the new Fellow candidates.
- b. The Membership Committee shall also be responsible for identifying and nominating potential candidates for recognition as Honorary Life Members. Any candidates nominated shall be voted upon for membership according to the same procedure employed for the election of Fellows.

Section 3. Expulsion

Conviction of a felony, or other conduct detrimental to the purpose or image of the Association, or in conflict with the Code of Ethics, shall be grounds for expulsion of a member. Charges shall be filed with the EVP who shall present them to the EB. A 2/3 vote of the Board members present and voting shall be required for expulsion, and such decision shall be final.

ARTICLE XII. DUES

Section 1. Dues for each category of membership shall be set by the EB and reviewed annually.

Section 2. The EB will determine when dues must be paid and when delinquent. This will be posted in the EB meeting minutes.

Section 3. A member suspended for non-payment of dues may be reinstated as authorized by the EB.

Section 4. The EB shall make all decisions that would result in any fee change.

ARTICLE XIII. ELECTIONS, OFFICERS, TRUSTEES, DUTIES AND TERMS OF OFFICE

Section 1. Officers

- (A) The EVP shall be elected by the EB and the terms of employment and compensation shall be determined by the Board.
- (B) The other officers of the Association shall be elected by the Association membership during the annual business meeting in odd numbered years. ~~The officers shall serve for 2 years or until their successor has been elected. The President shall appoint a Nominating Committee, subject to the approval of the EB, to submit nominations at these annual meetings. Nominations may also be made from the floor by individual members. All nominees must be members of the Association in good standing. Election shall be by a majority vote of these members in attendance.~~ **[Each individual nominated shall be a CAMA member and shall have been approved for nomination by at least a simple majority vote of the Nominat-**

ing Committee. Election shall be by a majority vote of those CAMA members in attendance. The officer shall serve for 2 years or until a successor has been elected. For information on how the Nominating Committee functions, see Section 6. For information on how the Nominating Committee is organized, see Article XIV, Section 3. For information on Additional Nominations, see Section 7.]

- (C) In the event of any officer being unable to serve the full term for which he/she was elected, the President shall convene a meeting of the EC to select an interim replacement. That individual shall serve until the next regular election of officers as provided for in sub-section (B) above.

Section 2. Trustees

- (A) The Trustees shall number 15. Each shall serve for a term of 3 years. In order to provide for continuity and orderly turnover of the Board, 1/3 or 5 Trustees shall be elected at each Annual Scientific Meeting.
- (B) In the event of the inability of a Trustee to serve, the Board, by a majority vote, may elect a successor for the remainder of that Trustees term.

Section 3. Specific Terms of Office

- (A) The elected Officers and Trustees shall serve from the date of their election during the general business session at a CAMA Annual Scientific Meeting until their successors are elected during the general business session of the Annual Scientific Meeting in the year that their term of office expires.

Section 4. Duties

- (A) The President shall preside at the meetings of the Association, all meetings of the EB, and all meetings of the EC. He/she shall appoint the editor and the associate editors of the Association publications, all ad hoc committees, and have those other duties and powers customary to the office.
- (B) The EVP shall serve as the general manager of the Association and shall support the EB, and the Association publication editor(s) in the performance of their responsibilities.
- (C) The President-Elect shall preside at all meetings in the absence of the President. In the event of a vacancy of the office of the President, the President-Elect shall assume the office of the President.
- (D) Each Vice President shall serve as the chair of the section for which he/she is elected. He/she shall report to the President periodically, at least twice yearly, regarding all interim activities in his/her section. In the event of the absence or inability of both the President and the President-Elect to serve, the EB shall designate one of the Vice Presidents to assume the duties of the President.
- (E) The Secretary-Treasurer shall be responsible for the minutes and other records of the Association. They shall serve as Secretary to all meetings of the Association and to all meetings of the EB and EC. They shall complete meeting minutes within 30 calendar-days of meetings. They shall share, with the EVP, the responsibility for receiving and disbursing the funds of the Association and maintaining records of those actions.
- (F) The EB shall serve as a committee of the whole to consider any/all issues confronting the Association, to deliberate and enact any actions of the Association and to review the documents and policies of the Association regularly at the discretion of the EB. It shall be the duty of each Trustee to inform himself/herself concerning timely matters to be presented to the EB.
- (G) Emeritus members shall act as advisors to the Board, and attend and serve at their pleasure.

Section 5. Attendance and Quorums

- (A) Any Trustee or Officer who fails to attend two consecutive meetings without providing an explanation to the President or EVP before the second missed meeting may be deemed insufficiently interested and may, by a majority vote of the EB, be replaced.
- (B) A majority of the duly elected members of those present shall constitute a quorum of the EB and shall have full authority to transact any/all business of the Association.
- (C) Fifty (50) CAMA members shall constitute a quorum at the Annual Business Meeting.

[Section 6. Nominating Committee

- (A) Officers and trustee members shall be nominated by the Nominating Committee.
- (B) The Nominating Committee shall conduct its activities by various means of communication, but will utilize email communications when finalizing its nominations.
- (C) The final report of the Nominating Committee shall be made to the EB prior to the Annual Scientific Meeting and orally at the annual Business Meeting during the Annual Scientific Meeting.

Section 7. Additional Nominations

- (A) Any CAMA member in good standing may offer additional nominations(s). In order to do so, The member must include the full name of the nominee and the office for which they are nominated. The nominating member must provide written notice of the nomination to the EVP no less than twenty-four hours before the Annual Business Meeting. The written notice must also be accompanied by a petition of the at least 2% of the active members of the Association. Lastly, the nominating members must formally announce the nomination from the floor at the Annual Business Meeting.

(B) For final consideration of the nomination(s), at least two thirds majority vote of the members in attendance at the Annual Business Meeting must be provided to accept the nomination(s) for the named position.]

ARTICLE XIV. COMMITTEES

Section 1. Executive Committee (EC)

- (A) The elected officers of the Association and the Immediate Past President shall constitute the EC. A simple majority shall constitute a quorum. The EC shall be empowered to conduct the business of the Association between meetings of the EB. The EVP shall be an ex officio member of the EC.

Section 2. Ad Hoc Committees

- (A) The President, with the advice and approval of the EB, may appoint ad hoc committees to assist in the work of the EB. The President shall appoint the chairperson of each ad hoc committee.

Section 3. Standing Committees

- (A) ~~[The following] S[standing committees [will report to the following Vice Presidents and be appointed and supervised by the elected Vice Presidents and reporting to those Vice Presidents shall be organized as follows:~~

1. Vice President for Management and Planning

- a. Awards. ~~[The appointed Chair for this committee is to be the Immediate Past President by default. If the Immediate Past President declines or abstains from accepting this appointment, then a volunteer or duly nominated non-elected member may be appointed as the Awards Chair by the Nominating Committee.]~~
- b. Bylaws. ~~[The appointed Chair of this committee is to also be named, and conduct meetings as, the Parliamentarian by default. If the Bylaws chairperson declines to accept the Parliamentarian role, or is absent from a meeting, then a volunteer or duly nominated non-elected member may be appointed as Parliamentarian by the Nominating Committee – on either a temporary role during meeting absence by the Parliamentarian, or on a permanent role with declination by the Bylaws Chair.]~~
- c. History. ~~[The appointed Chair for this committee is to be named the Historian.]~~
- d. Long Range Planning. ~~[The appointed Chair for this committee is to be the President-Elect by default.]~~

- e. Membership
 - f. Civil Space Medicine
2. Vice President for Education
 - a. Arrangements
 - b. Education/Training
 - c. Safety and Human Factors
 - d. Scientific Program
 3. Vice President for Representation and Communication
 - a. International Activities
 - b. Public Affairs
 - c. Website

[B. The Nominating Committee is a standing committee and will report to the President. It shall be made of two Executive Co-Chairpersons, the Immediate Past President, the two Past Presidents immediately preceding the Immediate Past President, the President-Elect, the EVP, and the Chairperson from each Committee. The Immediate Past President shall serve as a member of the Nominating Committee for a two-year term and then shall be appointed as one of the Executive Co-Chairpersons for a two-year term. The other Executive Co-Chairperson shall be appointed by the President. If another committee chairperson declines or abstains from being a member of the Nominating Committee, and if there are no other representatives available from their respective committee to serve on the Nominating Committee, then the President may replace them with another Past President.]

ARTICLE XV. PUBLICATIONS

Section 1. Print/Electronic

- (A) A CAMA publication shall be printed or produced electronically at regular intervals as determined by the EB. The Editor and Associate Editors, appointed by the President, shall be responsible for its content. They shall be guided by widely accepted standards of objective journalism. The Editor or an Associate Editor shall, insofar as is practical, attend all meetings wherein Association business is conducted.

Section 2. Website

- (A) Subject to the approval of the EB, the Association may post a site in the internet. A webmaster, approved by the EB, shall be responsible for maintaining the CAMA web site. Contents of the site shall be approved by the President with guidance and advice from the EB.



Need help with FAA paperwork?

"Pilot Medical Solutions provides case management services to reduce physician workload and streamline aeromedical certification."
 – *Aerospace Medicine & Human Performance Journal*



"Pilot Medical Solutions helped me to help my pilot patients by providing ready answers and reducing my paperwork burden."
 Erwin Samuelson
 Senior AME



"They do all the work while we get the credit and the thanks from the pilot. They are knowledgeable, quick, well known to the FAA Aeromedical structure and make the special issuance process a breeze."
 James Butler, Senior AME, Board Certified Aerospace Medicine



Pilot Medical Solutions, Inc.

www.LeftSeat.com

CALL 888-LEFTSEAT

EDUCATIONAL OPPORTUNITIES

Online Training, Refresher, and Resources for Continuing Medical Education (CME) Credit

With the potential travel and meeting restrictions imposed by COVID-19, opportunities for AME training and CME may become somewhat limited.

Ronan Murphy, MBChB, the CAMA Vice President of Education, has indicated that there are still resources online for those AMEs who need training and/or CME credits. Please see the information and links listed below.

If you are interested in becoming an AME, please contact the [FAA Regional Office](#) responsible for your locality. AME seminar attendance requires advance approval of the [AAM-400 Education Division](#).

Available resources from FAA 400 Education Division:

1. FAA AME refresher courses may be moved to a Zoom format if necessitated by COVID-20 restrictions. Click the link below to access the course schedules 2022:

https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/seminar_schedule/

- Attendance requires approval in advance. Contact your Regional Flight Surgeon for approval, and the RFS staff will check availability for the course of your choice.
- Registration opens three months prior to the start date of the seminar.
- Participants must have an FAA Designee Registration System account (DRS) to sign up for the AME Refresher course
- If you do not have an account on DRS and wish to have one, click the following link for instructions:

https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/media/drs.pdf

2. To locate other online courses that offer CME, click the following link:

https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/ametraining/

- Clinical Aerospace Physiology Review for Aviation Medical Examiners (CAPAME) – 6 hours American Association of Family Practitioners (AAFP) CME credit available
- Multimedia Aviation Medical Examiner Refresher Course (MAMERC) 3.0 - 6 hours AAFP CME credit available

NOTE: See the following page of this publication for a list of all 2023 courses and dates.

FEDERAL AIR SURGEON'S PILOT MINUTE VIDEO FILES (To activate each link, use "control" and "mouse click" at the same time)

[Pilot_Minute: What is jet lag and how can I prevent it?](#)

[Pilot_Minute: How is the FAA approaching new treatments for cancer?](#)

[Pilot_Minute: How do we encourage the brightest minds into aviation?](#)

[Pilot_Minute: How do I check my application status in MedXPress?](#)

[Pilot_Minute: Is it okay to fly if I'm just a little tired?](#)

[Pilot_Minute: What should I do if I have depression or anxiety?](#)

[Pilot_Minute: Why is it important to assess my health before piloting an aircraft?](#)

[Pilot_Minute: Why is it important to do a PRICE check before and during a flight?](#)

[Pilot_Minute: Why is it important to be careful with over-the-counter cold and sleep medications?](#)

[Pilot_Minute: Why is acceleration tolerance important for general aviation?](#)

[Pilot_Minute: What are the most essential items for a good survival kit?](#)

[Pilot_Minute: What's going on with the Aeromedical Summit?](#)

[Pilot_Minute: What are some tips for speeding up my medical certification?](#)

AVIATION MEDICAL EXAMINER (AME) SEMINAR SCHEDULE

For full information, visit the FAA web site at: https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/seminar_schedule/

DATE OF SEMINAR	SEMINAR LOCATION	SEMINAR TYPE
March 20-24, 2023	Oklahoma City, OK	Basic
May 22-26, 2023	New Orleans, LA	AsMA
June 12-16, 2023	Oklahoma City, OK	Basic
August 4-6, 2023	Washington, C	Refresher
October 5-7, 2023	Omaha, NE	CAMA
October 23-27, 2023	Oklahoma City, OK	Basic

* The 2023 seminar schedule shown MAY change to virtual format should COVID-19 protocols change in 2023.

** We (FAA) recommend that you make sure all travel and lodging reservations are refundable. While scheduled to proceed as an in-person seminar, it may be rescheduled as a virtual seminar with little notice. This seminar will open for registration when the contract is approved and hotel room block information is received.

Register for a Refresher Seminar

Registration opens **three months** prior to the start date of the seminar. To register for a refresher seminar, you will need an account to access the Designee Registration System (DRS). Please review the instructions (PDF) on the FAA web site for creating a DRS account. Registration is open to the FAA Aviation Medical Examiner (AME)

If you are interested in becoming an AME, please contact the FAA Regional Office responsible for your locality. AME seminar attendance requires advance approval of the AAM-400 Education Division.

Accreditation Statement

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

Seminar Types

Basic

A 4 1/2 day AME seminar focused on preparing physicians to be designated as Aviation Medical Examiners. Contact your Regional Flight Physician

Refresher

A 2 1/2 day AME refresher seminar consisting of 12 hours of AME specific subjects. You must use the Designee Registration System (DRS) to register for a seminar.

Aerospace Medical Association (AsMA)

A 3 1/2 day AME seminar held in conjunction with the Aerospace Medical Association (AsMA). Registration must be made through AsMA. Call 703-739-2240, extension 106/107. A registration fee is charged by AsMA to cover their overhead costs. Registrants have full access to the AsMA meeting.

Civil Aviation Medical Association (CAMA)

Sanctioned by the FAA, this seminar is sponsored by the Civil Aviation Medical Association (CAMA) and does fulfill the FAA recertification training requirements. Registration may be completed through the CAMA web site (www.civilavmed.org) or by calling CAMA at 770-487-0100

AME MINUTE ISSUE GUIDE

The FAA issues monthly reminders/updates for Aviation Medical Examiners in the form of a brief audio file with information on an important subject. Following is a summary of the most recent AME Minute issuances, in case you might have missed one. AME Minute items may be accessed from the FAA archive at: https://www.faa.gov/other_visit/aviation_industry/designees_delegations/designee_types/ame/videos/

[AME Minute: Why did the FAA change vision limitations?](#)
[AME Minute: Why are commercial balloon pilots asking for exams?](#)
[AME Minute: Why do CACIs require specific verbiage?](#)
[AME Minute: Why does the FAA list some medications as conditionally acceptable?](#)
[AME Minute: Why did the FAA revise the GO AME website?](#)
[AME Minute: Medical Certification Updates for the AME – September 2017](#)
[AME Minute - 10 Color Vision Testing](#)
[AME Minute: Why should AMEs review visits to health professionals?](#)
[AME Minute: Why would a pilot need a verbal authorization?](#)
[AME Minute: Why did I receive a letter about a vision restriction?](#)
[AME Minute: Why does the FAA disallow AMEs from using PRNC?](#)
[AME Minute: Why does the FAA allow recertification of pilots with CHD?](#)
[AME Minute: Why do different anticoagulants have different wait times?](#)
[AME Minute: Why did the FAA introduce a policy on the TAVR procedure?](#)
[AME Minute: Why is the FAA concerned about left atrial appendage closure?](#)
[AME Minute: Why are there new requirements for AFIB or A-Flutter?](#)
[AME Minute: Why can breast cancer be issued by an AME?](#)
[AME Minute: Why do AMEs need to update their profile in DMS annually?](#)
[AME Minute: Why did the FAA issue new guidance regarding pancreatitis?](#)
[AME Minute: Why is the FAA concerned about Over the Counter Sleep Aids?](#)
[AME Minute: Why does the monitoring protocol for ITDM require so many reports?](#)
[AME Minute: Why is the FAA now certifying pilots who are on insulin?](#)
[AME Minute: Why did the FAA add an upload feature to AMCS?](#)
[AME Minute: Why do pilots need to be concerned about CBD products?](#)
[AME Minute: Why do AMEs need to worry about Subpoenas? Part 2](#)
[AME Minute: Why do AMEs need to worry about Subpoenas?](#)
[AME Minute: Why is Unexplained Syncope Aeromedically Significant?](#)
[AME Minute: Why is an evaluation required post myocardial infarction?](#)
[AME Minute: Why is Chronic Immune Thrombocytopenia a CACI?](#)
[AME Minute: Why was the CACI program developed?](#)
[AME Minute: Why is an Incomplete Right Bundle Branch Block considered a normal variant?](#)
[AME Minute: When is a Special Issuance required under BasicMed?](#)
[AME Minute: What Makes Aerospace Medicine Unique?](#)
[AME Minute: Near and Intermediate Vision Testing](#)
[AME Minute: New Oral Anticoagulants in the DVT Protocol](#)
[AME Minute: Identification of ECG Normal Variants Reduces Delays - Part 5](#)
[AME Minute: Double Vision and Heterophoria Testing](#)
[AME Minute: Aeromedical Implications of Disability Benefits Reported by Pilots](#)
[AME Minute: Identification of ECG Normal Variants Reduces Delays - Part 4](#)
[AME Minute: What's So Special About Disposition Tables?](#)
[AME Minute: What the FAA Needs to Know About Monovision Lenses](#)
[AME Minute: Why did the FAA update criteria for PTSD?](#)
[AME Minute: Identification of ECG Normal Variants Reduces Delays - Part 3](#)
[AME Minute: Identification of ECG Normal Variants Reduces Delays - Part 2](#)
[AME Minute: Identification of ECG Normal Variants Reduces Delays - Part 1](#)
[AME Minute: How Do AMEs Keep Designation Information Up To Date?](#)
[AME Minute: Radionuclide Stress Test and Holter monitor: What does the FAA Want?](#)
[AME Minute: CACI Worksheets Speed Up Medical Certification](#)
[AME Minute: How Certification Aids Speed up Information Collection for Pilots](#)
[AME Minute: Colon cancer timeframes for medical certification](#)
[AME Minute: The SSRI recertification checklist](#)
[AME Minute: Why did the FAA add new guidance for some psychiatric conditions?](#)
[AME Minute: Why did the FAA add an application status dashboard to MedXPress?](#)
[AME Minute: Why does the FAA need a detailed clinical progress note?](#)
[AME Minute: Why do AMEs need to transmit exams within 14 days?](#)
[AME Minute: Why did the FAA create new OSA status report requirements?](#)
[AME Minute: Why do some autoimmune arthritis medications no longer require a Special Issuance?](#)

Civil Aviation Medical Association

Sustaining, Corporate, and Life Members

The financial resources of individual member dues alone cannot sustain the Association's pursuit of its broad goals and objectives. Its fifty-plus-year history is documented by innumerable contributions toward aviation health and safety that have become a daily expectation by airline passengers worldwide. Support from private and commercial sources is essential for CAMA to provide one of its most important functions: that of education. The following support CAMA through corporate and sustaining memberships, and we recognize the support of our lifetime members:

Corporate Members & Sponsors

AirDocs Aeromedical Support Services
Gregory Pinnell, MD
MBS International Airport
8430 Garfield Road
Freeland, MI 48623
www.airdocs.net

Air Line Pilots Association, International
John Taylor, National Pilot Assistance Chair
7950 Jones Branch Drive, Suite 400 S
McLean, VA 22102
www.alpa.org

Allied Pilots Association
14600 Trinity Boulevard, Suite 500
Fort Worth, TX 76155
www.alliedpilots.org

Aviation Medicine Advisory Service
15530 E. Broncos Parkway, Suite 350
Centennial, CO 80112
www.aviationmedicine.com

BetterNight Solutions
54714 Kearny Villa Road, Suite 200
San Diego, CA 92123
www.betternight.com

Fly Direct, Inc.
3022 Morgans Point Road, Suite 204
Mount Pleasant, SC 29466
AME Pilot Medical Advertising
Advertising@DFmailing.com

Harvey Watt & Company, Inc,
P. O. Box 20787
Atlanta, GA 30320-9990
www.harveywatt.com

The Ison Law Firm
Anthony Ison, Esq.
P. O. Box 6342
Lakeland, FL 33807
www.thepilotlawyer.com

MedAire, Inc.
4722 N. 24th Street, Suite 450
Phoenix, AZ 85016
www.medaire.com

Pilot Medical Solutions, Inc.
David Hale, CEO
5901 Philip J. Rhoads, Suite 118
Bethany, OK 73008
www.leftseat.com

Wingman Med, LLC
225 N. Pace Boulevard, Suite 410
Pensacola, FL 32505
PilotDoctors.com
www.wingmanmed.com

Civil Aviation Medical Association (CAMA)

Contact Information:

Mailing address:

CAMA
P. O. Box 823177
Dallas, TX 75382

Telephone:

770-487-0100 (Voice or Text)

Secure FAX:

770-487-0080

Web Site:

www.civilavmed.org

eMail:

civilavmed@aol.com



NOTE: The articles published in this newsletter are presented for informational purposes and topics of discussion and do not necessarily represent the opinions or recommendations of the Civil Aviation Medical Association.

Life Members

Prof. Michael Bagshaw, MB BCh
Raymond S. Basri, MD, FACS
Sanjeev Batra, DO
Kris M. Belland, DO, MPH
Michael A. Berry, MD, MS
David E. Blocker, MD, MPH
Michael Boyer, MD
Bascom K. Bradshaw, DO, MPH
John R. Capurro, MD
Daljeet Kimberley Chawla, MBBS, FCGP, DNBE
George H. Coupe, DO
Bill B. Curtis, MD
Daniel Danczyk, MD, MPH
Andrew J. Davis, MD
M. Craig Delaughter, MD, PhD
Mark C. Eidson, MD
Mohammed Eisa, MD
Tony Evans, MD
Donna Ewy, MD
Thomas B. Faulkner, MD
Edmond Feeks, MD, MPH
Christopher F. Flynn, MD
James R. Fraser, MD, MPH
Christopher Freeze, ATP
Aynalem Gebremariam, MD
Robert Gordon, DO
Richard T. Grossart, MD, MPH
Bradley K. Harrison, MD
Dottie Hildebrand-Trembley, RN
Ernst J. Hollman, MD
Petra A. Illig, MD
Danny S. Julian, MD
Joseph Kearns, DO
Atsuo Kikuchi, MD
Stephen M. Kirkland, MD
Stephen D. Leonard, MD

Alex M. Leonard, MD
Harriet A. Lester, MD
Ernest J. Meinhardt, MD
Andrew H. Miller, MD
Robert M. Monberg, MD
Story Musgrave, MD, PhD
Thomas Nguyen, MD
Michael G. Nosko, MD, PhD
Hugh J. O'Neill, MD
Gregory L. Ostrom, MD
Milton A. Padgett, MD
Rob G. Parrish, MD, PhD
Michael A. Pimentel, DO
Jeffrey P. Powell, MD, DDS
Scott Redrick, MD
Sean Kevin Roden, MD
Robert M. Roeshman, MD
Mark S. Rubin, MD
Gerald W. Saboe, DO, MPH
Philip Sidell, MD
Sergio B. Seoane, MD
Kazuhito Shimada, MD
Brian Smalley, DO
Basil P. Spyropoulos, MD
E. Warren Stadler, Jr., MD
Gordon C. Steinagle, DO, MPH
Ruth Steward, RN
Shepard B. Stone, DMSc, PA
Frederick E. Tilton, MD, MPH
Robert Abe Timmons, DO
Salil C. Tiwari, MD
Lars Tjensvoll, MD
Bruce A. Van Dop, DO
Stephen J. H. Veronneau, MD, MS
Kathryn Weesner, MD
Alex M. Wolbrink, MD, MS

CAMA is very pleased to announce a number of new members to our organization since our last publication. We welcome the following physicians and organizations into CAMA, and we look forward to working with each of them over the coming years.

New Members

Craig D. Bartruff, MD
706 E. 4th Street
McCook, Nebraska 69001-3234
AME, EAA, AOPA, AAFF
Specialty: Family Practice

BetterNight Solutions
Scott Kennedy
5471 Kearny Villa Road, Suite 200
San Diego, CA 92123
Specialty: Sleep Medicine
Corporate Membership

The Ison Law Firm, Anthony Ison, Esq.
P. O. Box 6342
Lakeland, FL 33807
www.thepilotlawyer.com
Specialty: Counselors re: airman medical certification matters

Kathryn Weesner, MD
10321 Cherokee Lane
Leawood, KS 66206
AOA
Specialty: Anesthesiology
Life Membership



CAMA MEMBERSHIP DUES NOTICE FOR 2023



(*Required Information)

*MEMBER NAME & TITLE:	
*MEMBER STREET ADDRESS:	
*MEMBER STREET ADDRESS:	
*MEMBER CITY/STATE/ZIP/COUNTRY:	

AME NUMBER:		SENIOR AME?	YES		NO	
-------------	--	-------------	-----	--	----	--

Permission to add name and address to the CAMA Web Site in the Members Only Section?	YES		NO	
--	-----	--	----	--

Please complete and return with your payment.

NOTE: Membership is from January 1st through December 31st of each year

Membership dues..... \$ 150.00 U.S. Dollars
 Sustaining Membership dues (optional)..... \$ 300.00 U.S. Dollars
 Membership dues for Retired Members..... \$ 50.00 U.S. Dollars
 Membership dues for Students..... \$ 50.00 U.S. Dollars
 Life Membership.....\$1500.00 U.S. Dollars

Payment Options: CAMA Accepts checks, MasterCard, VISA, or American Express.

CHECK ENCLOSED	#	MASTERCARD		VISA		American Express	x
----------------	---	------------	--	------	--	------------------	---

CREDIT CARD NUMBER:	
EXPIRATION DATE:	
CVV/CVC SECURITY CODE:	
BILLING ADDRESS ZIP CODE:	
TOTAL AMOUNT/AUTHORIZED CHARGE \$	
PRINT NAME:	

Signature or authorization statement for charge: _____

SPOUSE/SIGNIFICANT OTHER NAME:	
--------------------------------	--

Check if you are a member of:

*PILOT	YES		NO		*EAA	YES		NO	
*AME	YES		NO		*AOPA	YES		NO	
*AMA	YES		NO		*FPA	YES		NO	
*HIMS	YES		NO		*AAFP	YES		NO	
*AOA	YES		NO		*AsMA	YES		NO	

*SPECIALTY:	
*PHONE NUMBER:	
CELL NUMBER:	
*FAX NUMBER:	
*EMAIL ADDRESS:	

Return form to: CAMA
 P. O. Box 823177
 Dallas, TX 75382
 FAX: 770-487-0080
 Telephone: 770-487-0100
 email: civilavmed@aol.com

(*E-mail address is REQUIRED – all CAMA correspondence, registrations, notifications, and publications are sent via email. Please notify CAMA of any email address changes so you will not miss any important information! CAMA does not share your information with any other entity or organization.



CAMA CORPORATE MEMBERSHIP FOR 2023



Corporation/Business Name and Address:

Please complete and return with your payment.

NOTE: Membership is from January 1st through December 31st.
Corporate Membership dues..... \$ 350.00 U.S. Dollars.
CAMA accepts MasterCard, VISA, American Express, and checks only. You may pay corporate dues online on the "Members Lounge" page of the CAMA web site at www.civilavmed.org

Payment Options:

Check Enclosed # _____ MasterCard _____ VISA _____ AMEX _____

Credit Card Number: _____

CVV/CVC Security Code: _____

Zip Code of Billing Address: _____

Expiration Date: _____ Authorized Amount \$ _____

Print Name on Card: _____

Signature: _____

Return form to: CAMA
P. O. Box 823177
Dallas, TX 75382
FAX: 770-487-0080
Telephone: 770-487-0100
email: civilavmed@aol.com

PLEASE PRINT (* required information)

*Contact Person(s) Name: _____

*Specialty/Type of Business: _____

*Phone: # () _____

Cell # of Contact Person(s): () _____

Fax: # () _____

*E-Mail Address of Contact Person(s): _____

(E-mail address required – all CAMA correspondence, registrations, notifications, and publications are sent via email. Please notify CAMA of any email address changes so you will not miss any important information! CAMA does not share your information with any other entity or organization.