

AMAS®

Aviation Medicine Advisory Service

FAA Medical Expertise -- Our Physicians...Your Solution!

Quarterly Aeromedical Newsletter

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Season's Greetings!

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FAA Aeromedical Policy Update



FAA Policy & Personnel Update

CAMI Hypoxia Training – The FAA has developed a new option to enhance pilot recognition of hypoxia symptoms called the Portable Reduced Oxygen Training Enclosure (PROTE). This has the advantage over traditional altitude chamber training in that it is portable and avoids the risk of problems such as potential decompression sickness. Look for the PROTE at an aviation venue near you in the future.

AMAS Congratulates – Dr. Dan Berry for receiving the DOT's OneDOT Award as Manager of the Year for the Central Region. Since his arrival, Dr. Berry has embraced a customer friendly approach in assisting airmen and controllers alike and in the process has made the Central Region one of the more "pilot friendly" Regions.

FAR 61.15 reporting reminder – Suspension/revocation AND subsequent convictions are considered separate, reportable actions under this regulation even though they are related to the same incident. Airmen dealing with reporting requirements for DUI should discuss their case with an AMAS physician.

FAS Webinar on OSA – An editorial in the most recent Federal Air Surgeon's Medical Bulletin announced a new policy on screening for obstructive sleep apnea. The FAA held a webinar on 12 December with Dr. Tilton (Federal Air Surgeon, Dr. Mark Rosekind, NTSB member and Dr. Mark Ivey, FAA sleep medicine consultant, elaborating on the subject and responding to questions from the public. Several key points were emphasized. Screening for sleep apnea is not new. The FAA has been evaluating OSA and it has been considered a disqualifying, but waiverable, condition since 1996. Unfortunately, guidance provided to AME's has been lacking. FAA has recently undertaken activity to update and provide more thorough guidance to AME's on screening for the condition. Dr. Tilton confirmed in the webinar that this new guidance will be published in the Guide to Aviation Medical Examiners in January 2014 specifying screening and documentation requirements for pilots deemed at risk for obstructive sleep apnea. Pilots can expect to encounter this

FAS Webinar on OSA (continued)

new screening process after 2014 during their next medical exam. Full details of the policy and evaluation and recertification processes will be available in early January 2014. There is no plan by the FAA to go through the regulatory process advocated by several aviation organizations. Controllers are not immediately affected by this policy, but can anticipate a similar process in the future. Other informational sites on Obstructive Sleep Apnea:

National Institutes of Health www.nhlbi.nih.gov/health/health-topics/topics/sleepapnea/

National Sleep Foundation www.nhlbi.nih.gov/health/health-topics/topics/sleepapnea/

American Sleep Apnea Association www.sleepapnea.org

American Academy of Sleep Medicine www.sleepeducation.com/sleep-disorders/sleep-apnea/overview-facts

FAA Pilot Safety Brochure on OSA www.faa.gov/pilots/safety/pilotsafetybrochures/media/Sleep_Apnea.pdf

For information on insurance coverage for testing and treatment for OSA, please contact your insurance carrier. Most insurance carriers cover the majority of costs associated with this condition as it is cheaper to treat OSA than to cover the medical complications associated with untreated OSA.

For questions on the implications for pilots and controllers of screen for, diagnosing, treatment and FAA medical certification of obstructive sleep apnea and associated conditions, please see the AMAS home page link to Sleep Apnea policy at www.AviationMedicine.com. We continue to work with the FAA staff to streamline the certification process for pilots treated for sleep apnea to return them to the cockpit in the minimum time possible.

FAA Medication Update

Myrbetriq (mirabegron) - This is an allowed medication to treat overactive bladder as long as the underlying condition is well-controlled without medication side effects. Related medications such as Vesicare (solifenacin) and Enablex (darifenacin) are no longer acceptable for use during aviation duties.

Valium (diazepam) - This is a medication often prescribed on a limited basis to treat anxiety associated with medical procedures as well as muscle spasm. Because the elimination half life is up to 100 hours, the metabolites of this medication can stay in one's blood stream for extended periods. Recently the FAA modified its policies such that a single 5 mg dose requires at least a 48 hour grounding period; a 10 mg single dose requires 96 hours grounding; 2 doses requires 10 days; and more than 2 doses requires 20 days before return to duty assuming the underlying condition isn't disqualifying. Because of complicated and frequently changing medication policy, there is no official published FAA medication list, but the AMAS staff are always available to assist with "go" / "no-go" decisions.

FAA Resources

Video on FAA TV - <https://medxpress.faa.gov>

Pilot Brochure - <http://www.faa.gov/pilots/safety/pilotsafetybrochures/media/medxpress.pdf>

Users Guide - <https://medxpress.faa.gov/medxpress/Guides/MedXPressUsersGuide.pdf>

24/7 MedXPress Helpline 1-877-287-6731

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President's Corner / Wellness Article



Holiday Celebrations, Obesity and Sleep Apnea - Quay Snyder, MD, MSPH

The holiday season is upon us and with the celebration often comes a few extra pounds of weight to be shed in the New Year. An editorial in the most recent Federal Air Surgeon's Medical Bulletin and the ensuing controversy gives pilots another reason to shed some weight regardless of what the ultimate FAA policy is. Three goals have been central themes for AMAS and our clients since our inception: *optimizing health, improving aviation safety and maintaining medical certification.*

In 2010, I wrote an editorial opposing *universal* screening of pilots and ATCS for obstructive sleep apnea (OSA). Since then, I have attended several national and international conferences on sleep apnea, addressing the medical complications, cognitive and emotional consequences and strategies other forms of transportation are doing about this condition based on concerns for safety. I still oppose universal screening of asymptomatic individuals. However, to protect the careers of airmen and controllers, as well as supporting the health and safety goals above, there are significant benefits in identifying and treating individuals at increased risk with this very serious disease. Pilots and controllers concerned for their health and performance, their sense of well being and their careers should seek OSA screening if they have significant risk factors.

Defining common terms in this discussion is useful. Body Mass Index (BMI) is calculated by dividing a person's weight in kilograms by the height in meters squared. A BMI normal range is 18-24.9. Less than 18 is considered underweight. A BMI of 25.0-29.9 is considered overweight, while a BMI of > 30 is considered obese. A BMI greater than 40 is termed morbidly obese. 35.7% of the US adult population is obese according to the CDC and mortality rate rises exponentially for BMI's greater than 30.

Sleep apnea is a disease characterized by frequent intermittent cessation of breathing for greater than 10 seconds while sleeping (apnea) and/or reduced airflow with blood oxygen desaturation >4% (hyponea). Sleep apnea has several forms: obstructive sleep apnea (OSA) from mechanical obstruction of a person's airway which is the most frequent form; central sleep apnea (CSA) from defective signals to breathe from the central nervous system and a mixed form combining OSA and CSA. Obstructive sleep apnea is one of several sleep related disorders. I will focus on OSA since it has known identifiable risk factors and is the most common form.

Sleep apnea is usually diagnosed by a polysomnogram (sleep study) in a laboratory, but can also be diagnosed or excluded using various types of home studies. It is important to note the distinction between *symptomatic* OSA and the diagnosis of sleep apnea. Most people with sleep apnea are unaware they have it. The severity of OSA is scored using several tools, the most common being the Apnea-Hyponea Index (AHI) in a sleep lab and either an AHI or a Respiratory Disturbance Index (RDI) in home studies and sleep labs. Screening for, but not exclusion of, sleep apnea may be done with simple overnight oximetry studies (blood oxygen saturation) or some of the less sophisticated home studies.

Mild OSA is present when the AHI is between 5 and 15 **and** OSA symptoms exist. Many people with AHI's in this range have no symptoms at all. This group may not need treatment, either for medical or FAA certification reasons. Moderate OSA is defined as an AHI between 15 and 30, regardless of the presence of symptoms, while an AHI greater than 30 is termed severe OSA. Common symptoms associated with OSA include excessive daytime sleepiness (EDS), fatigue or impaired cognition. Other possible symptoms include snoring, gasping when sleeping, difficulty with short-term memory or concentration, frequent nighttime urination, reduced sex drive, morning headaches, irritability and a feeling of unrefreshing sleep. People with mild symptomatic OSA and with moderate/severe OSA benefit from treatment in several ways .

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President's Corner / Wellness Article (continued)

OSA is associated with significant increases in the risk of congestive heart failure, atrial fibrillation, high blood pressure requiring medication, high cholesterol, stroke, heart attacks, diabetes and depression. People with *untreated* OSA have a substantially increased risk of accidents while operating motor vehicles and heavy machinery. This risk is substantially reduced after just two days of treatment. Untreated sleep apnea is associated with three times the risk for fatal and non-fatal cardiac events, primarily in those less than age 65. There is also an association with adult epilepsy and sleep apnea as well as complications with surgery. Cognitive impairment from sleep apnea is common and improves with treatment. Each of these conditions presents a serious risk to one's health and aviation career.

A presentation from the Stanford University Sleep Center eloquently elaborated "The Relationship of Weight and Obstructive Sleep Apnea". A few highlights from this presentation are useful in understanding the concern over both conditions. Ironically, obesity is the biggest risk factor for OSA, yet OSA can lead to obesity. Treating one helps treat the other. The presentation points out:

- Obesity is the most powerful OSA risk factor and the only evidence supported risk factor to improve OSA
- Other OSA risk factors include alcohol intake, smoking, nasal congestion and menopause.
- Physical risk factors include a large neck, recessed jaw, enlarged tonsils, high arched palate, nasal obstructions (Mayo Clinic information), all which may collapse the airway when asleep
- Symptomatic OSA is present in 4% of middle aged men and 2% of women
- OSA without symptoms may be present in 25-58% of men and 10-37% of women
- 70% of those with OSA are obese (30% are not, but may have the physical risk factors above)
- 40% of those who are obese (BMI > 30) have OSA
- For those with a BMI > 30, 26% have an AHI > 15 and 60% have an AHI > 5
- For those with a BMI > 40, 33% have an AHI > 15 and 98% have an AHI > 5
- An increase in BMI of 6 or an increase in waist or hip size of 13-15 cm (5-6") increases the risk of OSA by a factor of 4
- Adding 10 kg (22 pounds) doubles the risk of OSA
- Waist obesity is more associated with OSA than hip obesity or BMI, even in non-obese people
- Hormones associated with sleep disturbance lead to increased weight gain and appetite

OSA reduces energy, physical activity, muscle energy metabolism and exercise performance, all leading to obesity. Treating OSA can lead to weight loss. Dietary weight loss significantly reduces AHI and oxygen desaturation, especially with high BMI.

What is my holiday message? Simple...OSA is a serious condition with significant health and career implications if left untreated. If you are at risk, get evaluated. The most common comment I hear from pilots who have been treated for OSA is "I never knew I felt so bad before, until I felt so good after treatment." Give yourself a gift of health and career preservation. Don't let OSA ground you.

A few references from academically sound and unbiased sources with many additional references:

- CDC section on *Obesity and Overweight* <http://www.cdc.gov/obesity/index.html>
- *Update on Definition, Consequences and Management of Obstructive Sleep Apnea*, Park et al, Mayo Clinic Proc. 2011 June; 86(6): 549-555. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3104914/>
- *The Relationship of Weight and Obstructive Sleep Apnea*, Zaharna, Stanford Sleep Center www.stanford.edu/~davesv/Weight%20&%20OSA.ppt

Airmen & Controllers - "Ask the Doc"



Question: I am on Special Issuance for my previous deep vein thrombosis (DVT) and required to be maintained on the blood thinner, Coumadin. Recently, I've seen commercials on TV for newer, alternative blood thinners. Are these allowed by the FAA to use in place of Coumadin?

Answer: Pradaxa, Xarelto, and Eliquis are the three newer "blood thinners," or anticoagulants, you've probably seen advertised as a replacement for Coumadin. All three are FDA approved for use in the prevention of stroke due to a cardiac arrhythmia called atrial fibrillation (that's not caused by a heart valve problem). Xarelto is the only one approved by the FDA for the treatment and prevention of DVT and pulmonary embolism, and the FAA has recently approved the use of Xarelto for pilots in both clinical settings as long as a 14 day ground trial on the medication shows no adverse side effects. Since you are currently on Special Issuance for your history of DVT and use of Coumadin, you could switch to Xarelto and then return yourself to flying once you've complied with the 14 day ground trial requirement, assuming no side effects, and then report the change to your AME at your next FAA medical with a note from your treating doctor detailing your transition to Xarelto and the absence of any side effects. In other words, this should not require review and approval by the FAA before you can return to flying as long as your AME concurs. Thus, we recommend you discuss the transition with your AME beforehand to make sure there will not be any problems with you being issued a medical certificate. Eliquis has not been FDA approved long enough for the FAA to review it. However, we are hopeful that Pradaxa will be allowed by the FAA at some point in the future for those that need anticoagulation due to atrial fibrillation.

Question: I was flying with a fellow pilot who has the same condition I do — hypothyroidism. I am on Special Issuance but she is not. Why the difference?

Answer: The FAA has come full circle regarding their policy for the treatment of hypothyroidism. With the release of the revised AME Guide in April 2013, hypothyroidism now no longer requires Special Issuance if you meet specific criteria. This is part of the FAA's CACI (Conditions AME's Can Issue) process which aims to simplify reporting requirements for several common medical conditions including hypertension, glaucoma, asthma and arthritis to name a few. As long as your condition is stable, you do not have any symptoms such as fatigue, mental impairment or pulmonary/cardiac/visual symptoms, you are on an approved medication (which most medications are), and you have a normal Thyroid Stimulating Hormone (TSH) level within the past 90 days, your AME can now issue you a regular medical certificate. In your case, if you can show you meet these criteria when you go for your next FAA medical, your AME should issue you a regular certificate and indicate on the application that you were previously on Special Issuance for this condition, but now meet the regular issuance certification standards for hypothyroidism. You will continue to have to provide your AME updates on your hypothyroidism annually to show that you continue to meet these criteria and are eligible for the regular certificate.

Happy 2014



AMAS News

NTSB Bar Association, November 2013 - Pensacola, FL The International Aviation and Transportation Safety Bar Association held their annual meeting in Pensacola 30 Oct – 2 Nov. Dr Snyder gave a presentation on “Legal Pitfalls in the FAA Medical Certification Process” to the attorneys in attendance.

Safety Standdown, October 2013 - Wichita, KS. The 4 day Safety Standdown USA hosted by Bombardier in Wichita during the first week in October brought 500 aviation safety representatives together. Dr. Quay Snyder presented a 4 hour workshop on FAA Medical Certification and Pilot Health and Safety.

The National Business Aviation Association, October 2013 - Las Vegas, NV. NBAA held its annual convention in Las Vegas October 21-25. Dr. Snyder serves on the NBAA’s Safety Committee and its Fatigue sub-committee which is updating 1997 guidelines for flight time and duty time in fatigue risk management for business aviation operations. A final report will be published in early 2014 by the NBAA and Flight Safety Foundation. Dr. Snyder presented “Assessing Personal Fitness for Flight” to the NBAA Single Pilot Safety Standdown sponsored by Cessna. A workshop on Optimizing Human Resources in the Flight Department featured Dr. Snyder where he discussed Medical Screening and Disability Programs and Assessing the Failing Aviator.

Aerospace Medicine Association - Dr. Snyder is a member of the Executive Council of the Aerospace Medicine Association and participated in its semi-annual Council meeting in Alexandria VA in November. He also met with the FAA Aerospace Medicine staff regarding implementation of obstructive sleep apnea screening guidelines.

We welcome your comments and suggestions! Our goal is to make this newsletter useful and informative for all our clients. If you have an idea for a topic you would like covered or have a comment about this newsletter or our services, please contact our Newsletter Editor, Nancy Bishop at nbishop@aviationmedicine.com.

Contact Us! 1-866-AEROMED (237-6633). Office hours are Monday through Friday, 9:00 am to 4:00 pm MT. Submit your records to us electronically at Records@aviationmedicine.com.

AMAS Welcomes our New Client

Kroger Aviation Department - November 2013

Onex Flight - November 2013

AMAS Welcomes our Renewal Clients

Texas Instruments (TI) - November 2013



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