

# Virtual Flight Surgeons® Inc.

“Our Physicians...Your Solution”

## Quarterly Aeromedical Newsletter

14707 E. 2nd Ave., Suite 210  
Aurora, Colorado 80011

1st Quarter 2007

Volume 6, Issue 1

### FAA Aeromedical Certification Policy Update

**FAA Staff Changes** – Dr. Roger Bison has joined the physician reviewer staff at the Aeromedical Certification Division in OK City. Dr. Bison is both a pilot and prior USAF flight surgeon, and welcome relief for the physician shortage at AMCD.

### Failure to Report and Falsification of Medical Applications



Long term readers of this newsletter may recall a notice we published in the 3<sup>rd</sup> quarter of 2005 regarding reporting on medical applications. To refresh your memory, in July 2005 a California investigation revealed more than 3,200 airmen holding FAA medical certificates and at the same time collecting Social Security benefits for “medically disabling conditions.” Of these, some 40 commercial and private pilots were prosecuted for “egregious” falsification.

On March 27<sup>th</sup>, Congressman Oberstar released a committee oversight report that can be found at <http://transportation.house.gov/Media/File/Aviation/Safe%20Pilot%20Committee%20Report.pdf>. That report called for expanding the type of investigation from 2005 and for a mechanism to spot check medical information on Airmen Medical Certificates. In our opinion such a program could be very problematic, especially if there isn't a clear process for handling inadvertent disclosure failures.

Should airmen or controllers find themselves in a potential failure to report a situation, please do not hesitate to contact our office. While “egregious cases” which could have affected aviation safety will likely be turned over to the FAA's Securities Division for enforcement action, our experience is that the FAA realizes the aviation safety benefit of having a process to correct minor oversights in reporting.

1-866-AEROMED

[www.AviationMedicine.com](http://www.AviationMedicine.com)



1-866-AEROMED

#### In This Issue:

FAA Aeromedical Policy Update	1
Medication Update	1
President's Corner	2
Pilot and Controller Health	4
VFS News	5
ATCS Sector	6
Staff Spotlight	7

# President's Corner

Quay C. Snyder, MD, MSPH



## Critical Performance Numbers for Pilots – Part Two – Blood Pressure

All pilots know the performance numbers/speeds for their aircraft.  $V_{REF}$ ,  $V_{NE}$ ,  $V_R$ ,  $V_1$ ,  $V_2$ ,  $V_{SO}$  are just some of the many critical numbers that are familiar and used on every flight for safe operations. Yet how many are familiar with their own personal critical numbers essential for the health and longevity of the pilot, the most important element of safe operations?

The National Institutes of Health and many health educational organizations publish guidelines for the public to help understand these key numbers. This article is the second in a series that address some of the most common diseases seen in the pilot population.

Heart disease is the number one killer of both men and women in the United States. The previous article discussed the role of Cholesterol in the risk of heart disease. A second important risk factor is blood pressure levels. As with cholesterol, it is a modifiable risk factor. You can control this risk, just as flight departments do in a sound safety management system.

Think of blood pressure as analogous to oil pressure in an aircraft, although the analogy of airspeed more closely reflects the role of blood pressure in the body. Too fast (or high) can lead to structural failure (heart attack or stroke) and too slow (or low) can lead to a stall (fainting). Running above maneuvering speed in turbulent air can lead to damage as can having a chronically elevated blood pressure.

### Explaining the Terms

Blood pressure is expressed as two numbers, the systolic and the diastolic pressures. The unit of measurement is millimeters of mercury (mm Hg). Blood pressure may be higher in the legs than in the arms and in some medical conditions, may be different between the right and left arm. (the right arm is usually higher). *Systolic pressure* is the measure of the maximum pressure the heart generates following each contraction at the location measured. When measuring blood pressure using a stethoscope to listen, the systolic pressure is recorded when sounds of the pulse are first heard over an artery when releasing pressure from an occlusive cuff.

The *diastolic pressure* is the pressure maintained in the arterial system when the heart is fully expanded just prior to contraction. It is recorded as the pressure measurement at the time of the last sound heard in the artery as pressure

is released from the occlusive cuff. The *pulse pressure* is the difference between the systolic and the diastolic pressures. Some disease states may either widen or narrow the pulse pressure. *Hypertension* is the medical term for elevated blood pressure.

*Arteries and arterioles* are muscular blood vessels carrying oxygenated blood from the heart to the body under high pressure. Because of their muscular nature, they can expand and contract altering the resistance to blood flow. Several classes of blood pressure medications work to relax the muscles of the arteries, thus lowering blood pressure. *Veins and venules* are low pressure vessels that return deoxygenated blood from the body to the heart and lungs.

### Blood Pressure Levels and Heart Disease Risk

The heart beats about 100,000 times and pumps nearly 2,000 gallons of blood daily. High blood pressure affects nearly 50 million Americans, yet only slightly more than 11 million are treated. It is associated with increased risk of heart attacks, strokes, kidney disease, eye damage, congestive heart failure and atherosclerosis. Hypertension causes about 180,000 deaths per year in America. It is known as a “Silent Killer” in that it rarely causes any symptoms.

Hypertension causes the heart to have to work harder and against more resistance to get oxygen and nutrients to the body. Blood vessels lose their elasticity and harden. The linings of the arteries harden, are damaged and are more susceptible to deposits of cholesterol. This increases the risk of clots blocking the arteries and damaging tissue.

Risk factors for hypertension include genetics/family history, race (Black Americans at increased risk), male gender for ages less than 55, increasing age, sodium (salt) sensitivity, increased alcohol consumption, obesity and overweight, sedentary lifestyle, pregnancy, use of oral contraceptives/hormones, kidney disease, increasing age and some medications and weight loss products.

The American Heart Association defines levels of blood pressure as normal, pre-hypertensive, hypertension-1 and hypertension-2. A medical emergency related to uncontrolled hypertension is termed a hypertensive crisis. The levels are listed below:

BP Category	Systolic BP	Qualifier	Diastolic BP
Normal	< 120	And	< 80
Pre-Hypertension	120-139	Or	80-89
Hypertension-1	140-159	Or	90-99
Hypertension-2	160+	Or	100+

## President's Corner (continued)

Most physicians would recommend lifestyle changes for initial therapy for Pre-hypertension. Medications may be appropriate for Hypertension, Stage 1 and Stage 2.

The maximum allowable untreated blood pressure for FAA certification for all classes is 155/95. The limits do not change with age. This is by no means a healthy number. However, this knowledge should allow pilots and controllers to relax slightly when taking their physical exam with their Aviation Medical Examiner. Relax!

### Improving Your Numbers

Ideally, blood pressure is controlled with lifestyle interventions. Basic steps include:

- Weight control – maintain ideal body weight or a Body Mass Index of 19-25
- Exercise aerobically – 150 minutes or more in 4+ sessions each week
- Limit salt intake – Sodium < 4 grams per day or < 2 gram/day if hypertensive
- Limit alcohol – 2 normal drinks/day or less (men), 1 drink/day (women)
- Eat Smartly – Fruits, vegetables, low-fat dairy products, low cholesterol foods

For some, lifestyle adjustments are not enough to control hypertension and medications may be required. Individuals who start on medications may be able to reduce or eliminate the need for medication at a later time if more aggressive lifestyle changes are successful in the future. Broad categories of medications to treat hypertension include:

- Diuretics – “fluid pills” increase urination and reduce blood volume and salt
- Beta blockers – reduce heart rate and the heart’s output of blood
- Alpha blockers – relax smooth muscles in arteries, increase capacity for blood
- Calcium channel blockers – slow heart rate and relax blood vessels
- ACE inhibitors – block Angiotensin Converting Enzyme in kidney, reducing arteriole constriction
- Angiotensin II receptor blockers – interfere with effects of Angiotensin in body

Ideally, blood pressure can be controlled with use of a single medication without any substantial side effects. Trials of different medications may be required to find the best combination of effectiveness and tolerability. Combinations of medications may be required to control blood pressure. Individuals should not discontinue medication suddenly. Likewise, they should not double dosages if one dose is missed.

The FAA authorizes the use of all blood pressure medications commonly used for both pilots and controllers. A minimal evaluation is required for FAA approval including a brief physical examination, laboratory tests, an ECG and a summary from the treating physician documenting the absence of side effects and effectiveness of the medication.

#### For Additional Information

The National Heart, Lung and Blood Institute has published excellent educational material with numerous on line links to understanding blood pressure. Please see their web site at <http://www.nhlbi.nih.gov/hbp/index.html> for more information.

The American Heart Association web site on Hypertension is found at: <http://www.americanheart.org/presenter.jhtml?identifier=2114>

The Virtual Flight Surgeons web site has specific information for pilots on cholesterol and FAA polices at [www.AviationMedicine.com](http://www.AviationMedicine.com). Type “Blood Pressure” in the search box for a link.

An Aviation Medical Examiner may clear a pilot to return to flying duties on medication. The reports must be included with the next FAA medical application. The FAA will require annual reports from treating physicians for airmen holding First and Second Class certificates. These reports include a current status report and a potassium level if taking a diuretic. Taking blood pressure medication does not threaten an aviation career. Not taking blood pressure medication when needed can threaten your life. The best solution is to adopt the right lifestyle habits to avoid having to worry about blood pressure.

Just as pilots can improve the performance of their aircraft by knowing critical numbers, they can improve their personal health by knowing their own body’s critical numbers.

...Signed CP

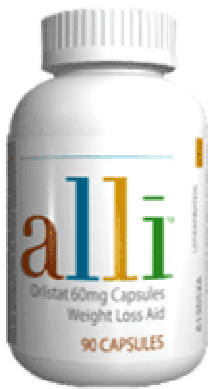




## Pilot Health and Wellness

### “Alli” : A New Weapon in the Battle of the Bulge?

By Phil Parker, MD



If fleeting glimpses of sunshine have you pondering swimsuit season, then no doubt you’ve heard of the new over-the-counter weight loss medication known as “Alli” (pronounced AL-eye). This is actually just a half strength version of a prescription medication (Xenical) that has been available since 1999.

Alli works by preventing some fat absorption in the intestines. Fewer calories absorbed or taken in on the *front end* generally lead to weight loss. The problem with this type of medication, however, occurs at the *back end*. Specifically “oil incontinence” (use your imagination here), bloating, loose stools and sudden urges to defecate can accompany use. Logically, these issues are magnified in the aviation environment. “Gray out” while flying is typically bad, but I suspect “brown out” could be significantly worse.

The FAA will allow the use of orlistat, which is the generic form of both Xenical and Alli, provided an adequate ground trial of about a week or so rules out potential adverse side effects. Ongoing use of medications has to be reported on the medical application and controllers would need to clear through the Regional Flight Surgeon before returning to work.



For those considering weight control options, there is an in-depth article available by entering “obesity” in the keyword search at [www.AviationMedicine.com](http://www.AviationMedicine.com). Any weight-loss medication should always be combined with a good diet and exercise program. The following table sums up the more common pharmaceutical options and their impact on flying status:

Medication:	How it works:	FAA Status:
Orlistat (Xenical & Alli)	Blocks fat absorption in intestines.	OK – once side effects ruled out.
Phentermine (Adipex-P) & Sibutramine (Merida)	Affect brain chemicals to suppress appetite.	The FAA does not allow use of these or any amphetamine derivatives – <b>Caution:</b> potential for positive drug test results.
Antidepressants such as bupropion	Appetite suppression – not FDA approved.	The FAA does not allow use of antidepressants.
Anti-seizure medications such as topiramate & zonisamide	Unknown	The FAA does not allow use of anti-seizure medications.
Metformin	Diabetes medication that also causes modest weight loss.	The FAA requires a 60 d observation period for oral diabetes medications and then FAA review before returning to flying. For ATCS the RFS will determine when can return to controlling.
Combo fenfluramine & phentermine (“fen/phen”)	Withdrawn from the market due to heart & lung problems.	Not Allowed

The bottom line is recognition of obesity as a chronic disease with no quick or simple solution. The article referenced above discusses the causes of obesity and its health consequences, metabolism, behavioral strategies, and medical intervention including bariatric surgery and it’s FAA implications.

Obesity and being overfat are serious risks to health. Effective strategies for achieving healthy and desired weight and body fat depend on a long-term commitment to changing behavior. Three major elements in a weight reduction program include behavior modification and support, calorie reduction through regular intake of limited amounts of nutrition rich foods, and regular exercise. Nutritional supplementation may be useful for those who can not eat healthy foods at every meal. Water and fiber intake are important adjuncts to avoid hunger. Most medications have potentially harmful side effects, generally only work while taking them, and are not allowed by the FAA for pilots/controllers. Surgery is appropriate only in extreme cases that have failed other methods to control fat and weight. Success takes time and persistence. The rewards of achieving and maintaining a healthy body fat percentage extend beyond physical and emotional health. People, like aircraft, will perform best with a desirable center of gravity, takeoff weight far below the maximum gross weight, high quality fuel without contaminants, and avoidance of prolonged periods on the tarmac without flight, regular maintenance and inspections.



**2007 NBAA Leadership Conference** - San Diego, CA - February 2007 - Dr. Snyder gave a presentation on "Healthy Living for Aviation Leaders." His presentation provided strategies for optimizing health in the hectic world of business aviation.

**Aeromedical Panel** - San Antonio, TX - March 2007 - Dr. Snyder participated in a joint panel of international aviation medicine experts at the USAF School of Aerospace Medicine (USAFSAM) discussion contemporary issues in commercial aviation medicine. The panel included physicians from the FAA, ICAO, the NTSB, American Airlines and the Aerospace Medicine Association.

**Alcohol and Substance Abuse Programs** - Prior to the panel at USAFSAM, Dr. Snyder led a seminar in the morning, discussing alcohol and substance abuse programs in commercial aviation with consideration of how similar programs could be implemented in the USAF.



### **VFS Customer Improvements.**

To better serve all our clients and provide greater access to our staff, we have implemented a menu tree on our telephone. Now callers can select from 5 brief customer service

options in order to be sent directly to the staff member they would like to reach. We are always looking for ways to improve and we really do appreciate your feedback! Send your comments and suggestions to our Customer Service Representative Eugene Tae at [etae@aviationmedicine.com](mailto:etae@aviationmedicine.com).

**Human Factors in Aviation Conference**, San Antonio TX - March 2007 - Dr. Snyder presented a talk on Medical Certification Standards to aviation safety experts from 9 countries, multiple airlines, aviation safety organizations and educational institutions.

**Southwest Airlines - SWAPA HIMS** - Dallas, TX - March 2007 - Dr. Snyder presented several talks on alcohol and substance abuse at the 2-day conference held in Dallas. HIMS (Human Intervention Motivation Study) is the joint FAA/airline alcohol and substance

abuse education program with over 30 years of success in the industry. For more information on the airline program, see [www.himsprogram.com](http://www.himsprogram.com). Corporate aviation program information is available on the VFS web site by typing "Alcohol Program" in the search box.



### **2007 Women in Aviation (WAI) Annual Conference** - Orlando, FL -

February 2007 - Dr. Phil Parker was on hand at the WAI annual convention to help announce VFS' role as Aeromedical Advisor to WAI. The VFS physicians will provide general Aeromedical advice to the WAI leadership and WAI members in good standing can receive a 5% discount on case services. Dr. Parker also provides a Question and Answer column in the WAI bi-monthly publication. VFS offers services through a Partnership Program to any aviation organization with more than 500 members. For information on these services, contact Catherine Cazorla at (720) 857-6117 ext. 322 or via email [ccazorla@aviationmedicine.com](mailto:ccazorla@aviationmedicine.com).

**NBAA International Operators Conference** - San Diego, CA - March 2007 - Dr. Snyder gave a presentation on "Hypoxia in Aviation" and discussed the risks and benefits of various Hypoxia training programs at the conference.

**Flight Safety Foundation Corporate Aviation Safety Seminar (CASS)** - Phoenix, AZ - May 2007 - Dr. Snyder will present "FAA Medical Certification Standards - Update 2007" at the upcoming seminar.

**VFS Complete Aeromedical Services Program (CASP) Clients** - all our CASP clients will have the opportunity for a private meeting with Dr. Snyder on May 8 at the Hilton El Conquistador in Tucson in conjunction with the upcoming CASS meeting. The meeting will cover client services, review of pilot safety and operating guidelines as well as any topic of interest to our valued clients. Contact Eugene Tae at (720) 857-6117 ext. 334 or send an email to [etae@aviationmedicine.com](mailto:etae@aviationmedicine.com) to schedule an appointment.



## ATCS Sector

### NATCA Presentations

VFS represents the 15,000 members of the National Air Traffic Controllers Association in protecting their health and medical qualification status with their employer, the FAA. As part of this relationship, VFS physicians give educational seminars to NATCA facility and Regional representatives.



Dr. Quay Snyder

Dr. Snyder gave a presentation for the facility representatives of the Eastern Region held in New Jersey during the last week of March. He also participated in the Federal Air Surgeon's Medical Team Meeting that was held on April 5th in Washington, DC, speaking on behalf of the NATCA membership.

Dr. Phil Parker will be on-hand for the NATCA Center Facility Representative Semi-Annual Meeting, which will be held in Las Vegas April 30th - May 3rd.

Because the meeting will be attended by many of the Facility Representatives, the group represents nearly 60% of the NATCA membership. Dr. Parker is scheduled to address the group on Tuesday, May 1st at 11:00.



Dr. Phil Parker



### Ask the Doc

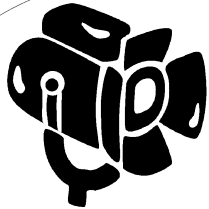
**Question:** I am planning to have cataract surgery. What issues can I expect?

**Answer:** An ATCS will not permanently lose medical qualification for use of an intraocular lens for cataracts, provided the vision standards are met after the surgery. Single vision lenses are approved by the FAA, and more recently also the new variable focal length lens known such as the Crystalens. With single vision intraocular lenses, an ATCS would have to use glasses for near and intermediate vision. The variable focal length lens more closely resembles the natural lens and allows both near and far vision. However, the FAA requires at least 3 months adjustment to variable lenses before allowing an ATCS return to controlling with Special Consideration. This 3 months is not required with the monofocal lens.

In general, you may continue to control as long as your vision meets FAA standards (20/20 at distant and 20/30 or better at near) in each eye. If your vision does not meet standards, you would be disqualified pending corrective surgery. After surgery, some controllers may return in as little as two weeks, although the observation period varies from Region to Region. You will need to have an FAA Form Report of Eye Evaluation, 8500-7 which can be found on our web site at [www.AviationMedicine.com](http://www.AviationMedicine.com) completed by your ophthalmologist at your final visit after your surgery. If you meet standards for vision, the Regional Flight Surgeon should return you to duties quickly (unless you require the 3-month observation for variable lenses described above).

We can not predict how rapidly your cataract will progress, though your treating clinician should be able to provide you some prediction by comparing change over the last few exams. Again, we would emphasize that existence of a cataract alone is not disqualifying if your vision still meets the FAA standards.

[www.AviationMedicine.com](http://www.AviationMedicine.com)



## Spotlight: Your VFS Staff

To better acquaint you with the physician and administrative team who serves you, VFS will profile a staff member each quarter. This quarter's spotlight is on the VFS Director of Operations, Catherine Cazorla.



Catherine is pictured with her son Sam, her daughter Caitlin, her husband Rob and their family dog, Shenzi.

Catherine joined the VFS staff in April of 2004, after retiring from the U. S. Air Force. She spent the first two years of her military career in the Ohio Air National Guard. She then entered active duty and served over 20 years in various roles within the Health Services Management and Student Training fields. She came to VFS from her last assignment at the HQ Air Reserve Personnel Center, where she served as the Chief of the Physician Incentives and Medical Readiness Division in the Surgeon General's Directorate. Catherine was born in Texas but hails from Gahanna, Ohio. She and her family have called Colorado home since 1995. She holds a Bachelor's degree in Business and is currently pursuing a Master's degree in Business Administration. As the Director of Operations, Catherine manages the staff and the day-to-day activities. She is also responsible for managing client contracts,

maintaining financial oversight and working as part of the VFS leadership team to steer the growth of the company. After hours, she enjoys biking, hiking and traveling with her family.

## Your VFS Newsletter



Our services are provided to you as a benefit from your company flight department or a membership benefit from your union or aviation association. VFS stands ready as the only board certified Aerospace medicine physician group available to provide you the assistance you need.

Our physicians are always a telephone call or email click away. We can respond to your medical questions and provide advice on any potential impact on your FAA Airman's Medical Certificate for medical conditions you might develop. All client discussions with our staff members are completely confidential and risk free. VFS is proud to be your one source for Aeromedical advice and FAA medical certification waiver assistance!

**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, please contact our Director of Operations, Catherine Cazorla via e-mail at [ccazorla@aviationmedicine.com](mailto:ccazorla@aviationmedicine.com).

### VFS Welcomes Our Newest Corporate Clients:

#### J. C. Penney Corporation

**OPT-OUT:** If you do not wish to continue receiving the quarterly VFS Aeromedical electronic newsletter, please reply to this e-mail and type "REMOVE" in the subject line. We will remove your e-mail address from our mailing list.

***THE VFS GOAL IS TO KEEP OUR CLIENTS HEALTHY, SAFE & MEDICALLY CERTIFIED!***

**[www.AviationMedicine.com](http://www.AviationMedicine.com)**