



Life Lines



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**F.A.A. SAFETY PROGRAM NEWSLETTER
FT. LAUDERDALE FLIGHT STANDARDS DISTRICT OFFICE**

**Bill L. Weaver – Manager, John Woods – Asst. Manager
1050 Lee Wagener Blvd., Suite 201 Ft. Lauderdale, Florida 33315
Cary Mendelsohn - SAFETY PROGRAM MANAGER, (Editor) 954-635-1326**

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www.faa.gov/fsdo/fl

“There are old pilots and there are bold pilots, but...”

Serving: *Broward, Glades, Hendry, Martin, and Palm Beach Counties*

By George Finlay,

Self-evaluating fitness for flight

He decided to step down from the P51 when he needed help getting out of the cockpit after doing a knife-edge the length of the runway at Reno, at an altitude of 100 agl.



It’s his knees. Breaking them both in a hard parachute landing some years ago shortened their useful life. So these days, for fun, he flies something that does not require the 250 lbs of force on the rudder that the Mustang needs during that knife-edge. He loves his little Extra 300L, which he says does the crispest 12 pt rolls he has ever seen.

And when he is convinced he no longer has what it takes to be safe in that bird, he will step down, at least another notch or two. He agrees that it is an excellent idea to have somebody you can trust to tell you when its time to slow down, or get out altogether. The man who will tell him is his Aviation Medical Examiner (AME). And he himself has recently tapped one flying friend on the shoulder and advised him that it was time to switch to two-pilot operations. His friend was 94 at the time.

Recognize him from that story? He is a pretty good stick and rudder man named Bob Hoover.



**Ben Coleman, SPM, ORL FSDO, interviewing Bob Hoover at
2004 “Sun n’ Fun.”**

There are two intertwined issues here: proficiency and fitness. If the sport pilot certificate is approved in its current form, there will be more pilots responsible to self-certify their mental and physical fitness for flight. Ultra-light pilots, sailplane pilots, and balloon pilots already self-certify.

Limitations of proficiency checks

As pilots, we all encounter regular formal or non-formal proficiency checks. Private pilots are formally checked by a flight instructor every two years; and every time a pilot flies, he notices what he does well and what he does not so well. For those of us working for a living in the cockpit, our proficiency is constantly tested. Airlines put their pilots through check rides regularly, and so do the growing number of corporate aviation departments and shared-ownership companies like Flexjet.

All of us who have been involved in checkrides appreciate them, and realize their limitations. On the positive side, they hinge on objective performance standards, so it is relatively easy to admit to oneself that, yes, I do deserve to be busted on that particular task, because I did in fact crash the simulator. On the other hand, we do know that there is room for subjectivity in judging performance. We have all cringed a little upon learning that we will face an examiner with an uncompromising reputation, and felt some sense of relief when we learn we will face a more flexible tester.

And when sitting in the examiner's seat, we are all aware of the variety of ways a pilot can put together a successful test performance. You can test one type of candidate, just getting into aviation, with a head full of new information, in a machine which they had not even seen until a couple of weeks before, and get a sterling performance. Most often they are young, though youth is no guarantee. You could put that same young candidate in an entirely different airplane in the next stage of his training, and shortly find that he or she meets or exceeds the proficiency standards at their level. You can test another type of candidate who is very familiar with the aircraft and has flown it regularly in a wide range of conditions. He or she is very unlikely to show unsatisfactory performance, and very likely to be older, just because it takes time to accumulate experience. He or she will quickly recognize the challenge you have thrown at them, be it a change in the weather, or a simulated equipment failure, and react quickly and correctly, almost as if by instinct.

On balance, you are more likely to trust those old foxes to fly your kids around before you would trust the neophytes. We tend to trust experience. But just how old a fox, and what criteria can we use to determine when accumulated experience is beginning to trumped by deteriorating mental and physical capacity?



Fitness benchmarks

We have all refused flights because we were too tired, too sick, or perhaps been drinking. Had we flown, we very well might pass might have passed a real-life proficiency check by safely completing the flight. But we correctly judged ourselves unfit that day. In the search for signs to look for in ourselves to help determine if we should disqualify ourselves in the long term, I asked my AME, Barry Zitomer, what he would recommend. For self-evaluation, he suggests using the same criteria he utilizes when advising elderly patients to give up driving. It is always a sad moment for him and for his patients, because driving is so important to freedom.

First, he looks for significant memory loss. Back in the junior year of medical school he learned that the average memory peaks right around that age. We pilots have checklists to help us of course, and we all have days when we are less sharp. **But if we find ourselves getting to a point where we consistently forget many of the critical details involved in flying an airplane we are familiar with, it is time to step down.**

A second sign is recurrent episodes of transient dizziness. I have had them when I was younger and the cause turned out to be ear infections. Any episode of dizziness means its time to stay on the ground, at least until the cause is found and the condition corrected.

And the third sign is deteriorating coordination. Dr. Zitomer looks at the ease with which his patients get on and off the examining table. We pilots have a regular built-in self-administered coordination test just getting in and out of tight cockpits.

The actual standard an AME uses to judge fitness are spelled out in 14 CFR 67. Much of it has to do with capabilities that are relatively easy to judge objectively, like vision, and coronary health. There are two sections, 107 and 109, that specify standards to use in judging mental and neurological fitness. The mental standards exclude substance abuse, psychoses and neuroses that the AME judges would interfere with pilot duties and the neurological standards exclude epilepsy or other seizures, disturbance of consciousness, and loss of neurological control, again, subject to the AME's good judgment.

Air Force Flight Surgeons are guided by a much more stringent and detailed set of fitness standards in AF 48-123, Attachment 7 (available at www.e-publishing.af.mil). Besides an exhaustive list of physical standards including criteria that apply to nose, throat, ears, eyes, lung and heart, there are detailed joint and neurological standards.

Lining up someone you trust to monitor your performance and tap you on the shoulder when you are not measuring up is a good strategy. For a private pilot, it could be a pact with a flying buddy, For members of the Airline Pilots Association, there is the maximum age of 60, mandated in Part 121, and there is a professional standards committee. If a pilot sees signs that a crewmember might not be fit, he or she has the option of referring the case to the committee for evaluation. The airlines almost always accept the union's recommendations in these cases. There are always two pilots in the cockpit at this level of passenger service, and recent improvements in Cockpit Resource Management training have probably helped reduce errors due to age, by putting in place more cross-check procedures and by training junior crew members to challenge captains when appropriate.

For Air Traffic Controllers, there is a mandatory retirement age of 56, in addition to annual examinations. Between exams, if a supervisor detects signs that a controller is losing the mental sharpness demanded by the job, he or she has the right to call for interim testing.

For air show performers, there are the Aerobatic Competency Evaluators (ACE). Leo Loudenslager was one the founders, and Sean Tucker is a current member of their safety committee. Before a pilot can receive an FAA Form 8710-7 permitting him or her to fly in an air show, an ACE must observe the proposed routine, and be able to make the following statement without reservation:

"The performer and his or her routine, as seen during the evaluation flight, do not, in my opinion, present any safety hazards to a potential audience nor to the performer himself or herself." (See Sect. 16, Air Evaluation Checklists and Standards, in ACE Manual, at www.airshows.org):

This is a form of proficiency check, but it is one in which the tester is watching what should be a familiar flight in an airplane that is very familiar to the pilot. So, unless the cause is a poorly designed routine or lack of practice or both, what can reveal themselves are signs that the pilot is not fit to fly. The ACE is looking in particular for signs of loss of total energy, the need to take a break, and signs of disorientation, all of which, in an experienced aerobatic pilot, could indicate the pilot himself does not have the mental or physical conditioning necessary for the flight.

Bruce Landsberg runs Aviation Safety Foundation for the Aircraft Owners and Pilots Association. He points out that pilots ought to pay more attention to keeping themselves in the best possible physical shape, since mental capacity is supported in many ways by physical conditioning. It is obvious that the brain benefits from good blood flow, with good supply of nutrients and oxygen. Not as obvious are the many subtle ways in which the mind is stimulated and nurtured by the challenges of physical activity. Bruce has a Labrador Retriever for a personal trainer. Every morning, regardless of the weather, that Lab gets Bruce up at 5:45 am for their walk, and Bruce and the Lab both reap the benefits.

An old borsch belt joke: "Now that I am getting older, I find myself thinking more and more about the hereafter; I go to the kitchen and I say what am I hereafter? I go to the basement and I say what am I hereafter?" We all experience forgetfulness at all ages, but there is no denying it gets more common with age.

How do we judge when forgetfulness and slow mental responsiveness make us unfit for flight? We are not talking about something as precise as a mag check. And our judgment is very likely to be distorted by our pride, our love of flying, and perhaps the need to continue making a living. My uncle Wendell, who introduced me to flying when I was a teenager, loved his Aztec. He and my aunt Very used to fly that trusty bird south every winter to Tucson, Arizona from their home in Kitchener Ontario. I called Very recently to ask if she remembered how Wendell had made the decision to stop flying in his seventies. She said he told her he was giving it up because he could no longer get the level of maintenance he wanted. Maybe so. But more likely his pride prevented him from telling her the truth -- he knew it was time for him to ground himself.

When it does come time to slow down, that does not mean we have to turn our backs entirely on aviation. One might consider transitioning from chief pilot to manager of a corporate flight department. In many cases, simpler flying would be wise and that could mean leaving the pressures of charter work for VFR sightseeing flights, selling the Saratoga to buy a Cherokee or an ultra-light, or giving up powered flight entirely in favor of soaring or ballooning. If one is lucky enough to already be accomplishing long cross-country flights in a sailplane, perhaps its time to cut back to local thermalling within gliding range of the airport. Active flight instructors can make good flight school or FBO managers, or get involved in other aviation-related activities, such as consulting or aircraft sales.

If there is enough money in the bank for beer and rent, then maybe its time to consider joining the legends of old birds who sit around airport ramps like barnacles on old sofas, ready to bore the next hapless victim with tall flying tales. →



Safety on the ground!



- Review airport layouts as part of preflight planning, during cruise, before descent, and while taxiing
- Review Notices to Airmen (NOTAMS) for runway/taxiway closures and construction areas
- Request progressive taxi instructions when unsure of the taxi route [4-3-18](#)
- Turn on aircraft lights while taxiing
- Clear the active runway on rollout as quickly as possible. Wait for taxi instructions before further movement [4-3-20](#) →



FAASafety.gov To receive important aviation information.

An 8000-point question from *“Who Wants To Be An Aire-man?”*

Instrument runway edge lights define the runway environment with white lights, except yellow lights are present for the: Last 2000’ or half the runway length, whichever is less; showing a caution zone for landing.

Wright Brothers Master Aviator Award

50 years in aviation? Then you may be eligible for this award. See: <http://www.faa.gov/fsdo/dpa/FAA-FS-I-8700-2%20Master%20Pilot%20Award.pdf> for details.

BLUESKIES

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As always, these and *all seminars are free* and good towards your next phase of the “Wings” Proficiency Awards Program.

See Faasafety.gov for directions and additional details.

July 13, (Wed.) 1900 hrs.	Ft. Lauderdale Executive Airport Authority (FXE) 6000 NW 21st Avenue (Cypress Creek Blvd). Ft. Lauderdale, Florida 33309 (954)-828-4966 <hr style="width: 50%; margin: 0 auto;"/> →→→	*Pilot/Controller Forum - “On the ground & in the air.”
Aug. 3, (Wed.) 1900 hrs.	West Palm Beach Int’l Airport (KPBI) 1000 Palm Beach Int’l Airport West Palm Beach, Florida 33406 (561)-471-7440 3rd Floor Conference room (Terminal Bldg.) <hr style="width: 50%; margin: 0 auto;"/> →→→	
Sept. 5, (Mon) 1900 hrs.	American Flyers 801 NE 10th Street Pompano Beach, Fl. 33061 (954)-785-1450	**Aeronautical Decision Making

Suitable for printing, pasting, or memorizing

(Maps and driving directions on “faasafety.gov” Check for changes before you leave home).

* Learn the “Ins and outs” of this airport, how to communicate more effectively and how to avoid a surface incident and airspace violation in and around Ft. Lauderdale and Palm Beach, Florida.

**ADM covers the dynamics of decision-making including human decision making limitations and influences.

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