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**FORUM**

**IS THE LEGAL PILOT REALLY SAFE?**

Richard O. Reinhart, M.D.

There's the story of a minister who, after a service, was asked by a parishioner if he really thought his sermon would be remembered and serve any purpose as we grow up. The minister, with a knowing smile, replied "Can you recall what you ate for supper one year ago today? Probably not. But you did receive nourishment that has helped you achieve your health today." An insightful observation. It's also a good analogy relative to the initial and recurrent training designed to continually educate a proficient and safe pilot.

Those of us in aviation education face the same challenges--feeding the new and maturing pilot with a continuous flow of "mental nutrients" devoted to making an aviator safer and more productive. We all recognize this challenge; we also focus our interest in just the pure joy of flight. These educational priorities are mirrored in our concentration in training curricula on piloting skills and performance. And yes, we also emphasize the "other" topics--meteorology, FARs, aircraft performance, weight and balance, aerodynamics, etc., etc.,.

This would appear to be a complete and a "nutritious academic meal" in the educational process. But we are missing some key ingredients--like the salt which makes some food palatable enough to eat. We often overlook the medical and physiological status (the "salt") that also makes a safer pilot. In other words, the best trained, experienced, proficient pilot is not safe if he or she is not fit to fly. Therefore, in response to my opening statement: "Is the legal pilot really safe," the answer is no. Simply being legal does not assure the pilot or the passengers that he is safely performing his responsibilities.

Flight physiology has always been a significant part of required training in the military, from day one of training through the entire flying career. Furthermore, most of us recognize that carrying a valid medical certificate and feeling good does not insure a safe pilot. But who's "feeding" the student the "salt of safety?" Beyond the medical topics of nutrition and exercise and

health, flight physiology must be a part of required courses at the undergraduate level--whether in courses covering human factors, or safety, or, as some colleges provide, a course devoted to flight physiology.

As you may know, I write the monthly column, "Fit For Flight" for *Business and Commercial Aviation Magazine*. I am also writing a comprehensive text book on flight physiology for the civilian aviator. This is my way of "feeding" students (and the maturing pilot) with a continuous "meal plan" so that it becomes a staple in their safety diets. I try to compare the attitude that we have to keep our aircraft "airworthy" to the same attitude we must have regarding a pilot's airworthiness. The ultimate question therefore becomes: Is the legal pilot really safe without being medically airworthy?

There continues to be a relative void of flight physiology topics in many aviation training and educational institutions. This often is a result of the absence of good physiology resources and data--real life data that the pilot can relate to and use. This means resources that provide physiological insight to being a safe pilot. Therefore, as the medical editor of the *Journal of Aviation/Aerospace Education and Research (JAAER)* I challenge the reader and the aviation education and training community to look beyond pilot proficiency and traditional ground school topics. Think pilot airworthiness. Send us material that reflects the physiological and medical problems of being safe--from a pilot's perspective. How does fatigue progress to affecting performance? Did you know that there are over a dozen common causes of fatigue? What happens to your judgment when you fly with a cold or the flu? How many "near misses" can be traced to a pilot's inability to perform at his peak? What sort of fears does the aviation community have with FAA medical certification? How can we get CFIs to lead the way in "feeding" our new pilots the fact that no pilot is invulnerable to performance degradations from physiological situations?

I hope you will accept this challenge. I look forward to reviewing papers dealing with these and many other human factors issues. Help us "preachers" by giving us new, insightful, and pertinent sermon material to share with our students and their CFIs.