

178 Seconds to Live

Managing the deadliest risk in aviation.

According to the 2007 NALL REPORT on **Accident Trends and Factors for 2006**, published by the AOPA Air Safety Foundation, *continued VFR flight into IMC (instrument meteorological conditions) remains **the** major cause of fatal weather accidents in single-engine aircraft.* While statistics show an overall improvement in general aviation safety over the years, the NALL REPORT concludes “*the long-term trend for weather related accidents is increasing.*”



This problem has been around for a long time. In fact a study was done in the early 50s in an attempt to determine why pilots continue to put themselves in harms way and once there, could a reliable solution be taught that would save the day? The study began by simulating an IMC encounter in aircraft piloted by private pilots untrained in instrument flight. If the encounters had been real instead of simulated every flight would have ended tragically. Some pilots lost control of their aircraft within 2 or 3 seconds after donning the hood. Others were able to postpone the inevitable for as much as 7 minutes.

In 1965, I duplicated the experiment with a private pilot friend of mine who was a simulator operator in the US Air Force and knew how to fly IFR. He had not yet acquired his own instrument rating, nor had he trained under the hood in an actual airplane.

We filed for an IFR clearance using a Cessna 172 and my name as PIC. After obtaining our clearance, we headed for the first cloud (actual not simulated). We both thought he was up to the task due to his Air Force training in running simulator missions. To our surprise, we were both wrong. Even though he knew how to read and interpret the aircraft instruments, the vertigo was so overwhelming that he quickly lost and could not regain control of the aircraft. It was a good thing he did not try this on his own!

Most pilots know how confusing vertigo can be when the natural horizon cannot be seen and the motion of the fluid in our ear's semi-circular canals is out of sync with the motion of the aircraft. It can feel like the airplane is banked while the flight instruments are telling us we are straight and level. The "official" solution is to rely on our instruments and act accordingly. And while the veracity of that statement is beyond dispute, it does nothing to relieve the distracting sensation of "the leans."

The trick is to get the motion in the semi-circular canals to be in-sync with the aircraft. The next time you feel like you are flying sideways when actually straight and level, try this: pitch up and down rapidly three times (porpoise on purpose so to speak). The resulting motion in the semi-circular canals will suddenly be in sync with the aircraft and the vertigo will vanish. Just make sure others in your airplane are informed of your intentions. Otherwise you may have a mutiny on board.

There is more to be said on this important subject, which will be continued in our next newsletter. In the meantime, life saving skills can be developed and nourished with a reasonable investment in time and money by scheduling simulator training with a qualified instrument instructor followed by hood or actual IFR in an aircraft (I can help with that).

Our thanks go out to everyone who has contributed to this effort and especially to Veldon Leverich who was kind enough to correct my terminology regarding Morse Code pronunciation. I do not want to compound the felony by misquoting so here is his comment verbatim:

FYI the correct way to express the letter V in writing Morse code is di di di dah. Not as you have written it dit dit dit dah. If you're expressing a Morse code character such as the letter D (-..) it would be expressed dah di dit. Or C dah di dah dit. The t goes on the last dot. It goes to the fluidity of expressing code verbally.

Just a quick note: Abrams Aviation Seminars is now an authorized seller of the NAV2GO navigation simulator. For more information or to order, call us (in the US) at 209 588-0711 or send an email to fred@abramsaviation.com with your phone and best time to call, and we will call you.

Always remember, a safe flight is no accident!

Fred Abrams
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