Try To Fly A Real Recovery

Turbulence and sloppy aircraft control can produce an upset in the instrument environment, and we need to practice recovery. Here are tips.

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The traditional approach to unusual attitude recovery training has become more of a drill than a lesson. Basically, instructors ask students to close their eyes, take their feet and hands off of the controls and put their heads down while the instructor gets to do aerobatics with the airplane. The instructor usually will give the aircraft back to the student in a critical attitude and ask the student to recover on instruments to straight and level. The student expects the aircraft to be nose-high nearing a stall, nose-low nearing the red line or in some other well-practiced critical attitude.What's wrong with this? For starters, it's not realistic. How many pilots, while at the controls, take their hands and feet off of the controls, close their eyes and put their heads down? None who I know.

Rethink The Drill

The old disorientation drill really doesn't teach the student not to revert to seat-of-the-pants flying. There should be more to this drill than just being able to safely get an aircraft out of an unusual attitude.The student should, at the very least, come away with an understanding about the dangers of following seat-of-the-pants sensations. A pilot who follows the body's imbalance signals while IMC is asking for an unusual attitude. Unless a person has experienced vertigo, it's hard to believe that the body lies.Until he becomes an instrument pilot, a person lives safely by listening to his body. It aches when overworked, it tells him when he is upside-down and it even tells him when it hasn't had enough rest.So when a flight instructor comes along and tells the student to believe the instruments and not the body signals — the sensations that have kept him safe so far in life — an effective demonstration will be required to make it believable.And because the unusual attitude wasn't self-induced, because someone else in the airplane flew the airplane from straight-and-level flight into an unusual attitude, the credibility of the event again is challenged.The student is asked to make corrections by using instruments, and that's fine, but it isn't training for the inadvertent encounter with an unusual attitude caused by turbulence, for example. Authentic unusual attitudes are likely to be self-induced.

Teach Thyself

As an instructor, I always have said that the best lesson for a student is the one that he teaches himself. Some of my best lessons were scenarios that my student set up — often by mistake — and where I could just sit back and watch, thinking, "I couldn't have planned this to work out better!"I think that this is especially true of unusual attitude recovery. I let the student or PIC unknowingly and perhaps unwittingly put the aircraft into an unusual attitude, and then I let him keep the airplane and recover.The next time that you practice unusual attitudes, try this. Don't take your hands or feet off of the controls. Instead, while under the hood — with a safety pilot or flight instructor — close your eyes and try to maintain straight and level. Ask your instructor or safety pilot to tell you when to open your eyes, and then recover using instruments or by visual references.This is a realistic setup, I think. You also will experience a psychological effect when you are saying to yourself, "Ah, let's see, hmm, this can't be happening — I never took my hands off of the controls. I didn't do this — the

instruments must have failed."It will not take long for you to put the aircraft into an unusual attitude when you fly blind, hanging onto the controls. It doesn't take long for an upset to evolve. The average pilot will deviate from straight and level in less than a minute.This is a more realistic approach to entering an unusual attitude. It also will show you how easily your body signals can fool you into thinking that the aircraft is doing something else.For some advanced unusual attitude recovery training, approach the problem the same way as above and then try some shallow turns. If you recover by the seat of your pants, you sometimes will turn in the opposite direction.

Instruments Don't Lie

Disorientation, the leans or vertigo usually starts the pilot on the road to an unusual attitude. Pilots of all experience levels are subject to vertigo. The well-trained pilot has learned to follow the flight instruments when there is a disagreement between body signals and flight instruments.Vertigo is defined as a state of temporary confusion — not knowing which way is up. It happens when misleading information is sent to the brain by the sensory organs. Your body may be telling you that you are in a turn when your flight instruments are saying otherwise.The well-trained pilot must be able to read and correctly interpret the flight instruments. And because it may be a failed flight instrument that has lead into the unusual attitude, the pilot learns that the scan, or cross-checking flight instruments, is the best way to catch a failing or failed flight instrument.So the pilot's best defense in avoiding unusual attitudes is learning how to correctly interpret flight attitude by reference to the flight instruments. The pilot also learns the limits of each flight instrument and what to expect when one reaches or exceeds its limit. For example, what is the limit on your attitude indicator? What will it look like when it exceeds this limit?The pilot learns that when trying to recover from an unusual attitude, an instinctive reaction likely will worsen the situation. You experienced this during initial stall training as a student pilot.During a stall, when a wing drops, a pilot's instinct is to pick it up with opposite aileron. But using too much opposite aileron at a slow speed without proper rudder makes the situation worse due to adverse yaw.Another area in which pilot instinct is incorrect is during spin recovery. Instinct may say to pull back when the airplane is pointed toward the ground. But we know that this is not correct. For most airplanes and most stall/ spins, pushing forward on the yoke is the beginning of the stall/spin recovery process.

Upset Training

More and more corporate flight departments and airlines are requiring that their pilots take some type of unusual attitude recovery training or upset recovery training. The increase in this type of training may be due in part to the fact that there have been several highly publicized upsets by airliners or corporate aircraft that have resulted in fatalities.One of the most recent and highly publicized incidents was the Falcon 900 in Greece that experienced an in-flight upset that resulted in several fatalities on board the aircraft. The pilots were able to recover from the upset and land the aircraft. But are you ready to recover from an inflight upset?Advanced training and practice will improve your chances at being able to recover from an in-flight upset or unusual attitude. An aerobatics course, advanced unusual attitude recovery or emergency maneuvers training will give you more confidence and improve your everyday flying skills.