



Maneuvering Flight

More than 25 percent of general aviation fatal accidents occur during the maneuvering phase of flight — turning, climbing, or descending close to the ground. The vast majority of these accidents involve buzzing attempts and stall/spin scenarios (half of which are while in the traffic pattern).

Stalls/Spins

The majority of fatal stall/spin accidents occur at low altitudes, when recovery is unlikely. A pilot can stall an aircraft at any flight attitude and at any airspeed. Try practicing stalls, or approaches to stalls, at a safe altitude with an experienced instructor. Remember that turns — either vertical (pull-ups) or horizontal — load the wings and increase the stall speed dramatically. A key antidote to maneuvering flight accidents in the pattern is being aware of stall/spin aerodynamics.

Target Fixation

Every pilot has practiced turns around a point to build skill in wind compensation, aircraft ground track control, orientation, and division of attention. However, stall recovery while turning around a point at the altitudes typically used for ground reference can be dangerously close to the ground. They're called *moose stalls* in Alaska and *coyote stalls* in Arizona because the pilot is focused more on a target of interest on the ground than turning the plane.



“Let’s Take a Minute for Safety” and watch a short video about how to avoid *moose stalls*. [Click here to watch.](#)

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Buzzing

Buzzing your friend's house to show off your piloting skills is never a good idea. It's reckless, and it may likely end in a violent angle-of-attack (AoA) stall. Buzzing is involved in 32 percent of maneuvering accidents, and they're usually fatal. It will not be the type of stall with minor altitude loss that you experienced in training.

Focus, Focus, Focus

Maneuvering flight, especially operations that require flight in the lower range of the airspeed indicator, is one phase of flight that deserves your full attention. Here a few tips:

Priorities. Remember that the iron law of aeronautical priorities is aviate, navigate, communicate. The slower you go, the more you should narrow your focus to priority number one: flying the airplane.

Distractions. When engaged in maneuvering flight, especially the takeoff–initial climb and approach–descent–landing phases, do everything you can to minimize distractions from every source. If you have passengers aboard, explain sterile cockpit practices during the preflight briefing and again when you conduct the pre-landing briefing. Even if you are alone, it is a good idea to self-brief. Verbally reviewing sterile cockpit procedures can help you establish the focused, no-nonsense mindset you need for critical phases of flight.

Briefings & Checklists. Be meticulous in reviewing critical requirements, procedures, and numbers before you need to use them. Maintain the

habit of self-briefings or, if you regularly fly with another pilot or a savvy non-pilot, develop standard operating procedures for conducting operational briefings and running checklists.

And, always watch your airspeed!

Resources

- ◆ FAASTeam Online Course ALC-34
Maneuvering: Approach and Landing
<http://1.usa.gov/1pAC9W3>
- ◆ “Getting It Right in Maneuvering Flight”
FAA Safety Briefing, March/April 2010
<http://1.usa.gov/1k4CzBG> (PDF page 17)
- ◆ “Slow, Steady, Sure”
FAA Safety Briefing, March/April 2011:
<http://1.usa.gov/1kOqteO> (PDF page 22)
- ◆ Airplane Flying Handbook
<http://bit.ly/2IYzSoN>
- ◆ AOPA Safety Advisor
Maneuvering Flight–Hazardous to Your Health?
<http://bit.ly/2IQEv86>

