

## Pulling Gs In U.S. Air Force F-16D

*Aviation Week*

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Descending through a heavy layer of thunderclouds as the pilot worked the radio, I gripped the handrails. Rationally, I knew I was safe—Lt. Col. Kevin Walsh had flown combat sorties in Iraq and Afghanistan and surely had hundreds of difficult landings under his belt. Still, looking up through the F-16's bubble canopy at the dense gray fog enveloping the jet, I fought panic.

Swallowing hard to clear my ears, I tried to remember my training. Body position is crucial in an ejection: Feet flat on the floor, back and butt as far back in the seat as possible, shoulders rolled back, spine straight, hands palm-up in my lap. Once I've cleared the aircraft—if I'm still conscious after ejecting at 12-14g—check the parachute canopy for rips. Land sideways, knees bent and roll. In the event of a water landing, fight off any sharks by poking them in the eye. Or was it the nose?

During the past hour, Walsh, better known as Thunderbird No. 7, had demonstrated all of the U.S. Air Force squadron's signature maneuvers in the skies above the Eastern U.S.—with me in the back seat hanging on for dear life.

### **Aviation Week Flies With The U.S. Air Force Thunderbirds**

<https://www.youtube.com/watch?v=H6AJbNINvVw>





***Aviation Week's Pentagon editor, Lara Seligman, hopped in the backseat of an F-16D for a ride with the U.S. Air Force Thunderbirds. Here, Thunderbird No. 7 flips the F-16D onto its back after executing a vertical climb, then begins a slow aileron roll. Credit: U.S. Air Force***

Waiting to take off from Andrews AFB, I had been a little nervous. It was drizzling. Dime-size droplets of rain and patches of fog obscured the glass cockpit of the red, white and blue F-16D Fighting Falcon. Oppressive gray clouds hung low to the ground; the forecast predicted thunderstorms.

Walsh powered up the Pratt & Whitney 29,500-lb.-thrust engine and pulled into the air. It was a bit of a letdown that we had to forgo the F-16's signature full-afterburner takeoff and unrestricted vertical climb due to the dicey weather, but I soon forgot my disappointment as I looked over my shoulder, watching the ground fall away.

Above the clouds the sky was a breathtaking blue, with no trace of the rain below. The Sun was huge, hot and blinding, so I kept my visor down and twisted the small vent in the cockpit until I felt a blast of cold air on the exposed skin above my flight suit.

We flew for about 10 min. at 5,000 ft, until we reached the allotted airspace above the marshes of Patuxent River, Maryland.

"Ready to pull some Gs?" Walsh asked.

I took a deep breath and got into body position, just like the flight surgeon, Capt. Glen Goncharow, had taught me hours before. I began to squeeze, pushing down with my feet and flexing my legs, abdomen and chest. I felt the blood rush into my head and my heart start to pound.

"Rolling to the left," Walsh said, turning the nose of the aircraft and beginning to accelerate. "Here come the Gs!"

I felt my G suit inflate, squeezing my lower body from the outside as I tensed my muscles harder against it, trying to minimize the rush of blood away from my brain. I took quick, short sips of air, like I'd been taught, grunting and straining against the hundreds of pounds of extra weight suddenly on my chest.

After what seemed like an eternity, Walsh rolled out of the turn. My muscles relaxed immediately, and I felt a slight euphoria.

That was just the warm-up. Over the next 30 min., Walsh showed me what the F-16D can do. We executed a giant loop, aileron rolls and inverted flight as I fought to keep my eyes on the horizon so I wouldn't have to use the alarmingly thin barf bag tucked into my G suit. Hanging upside-down at -1g during the slow roll, literally suspended by my straps, I felt like I was being pulled out of the aircraft.

My favorite move came about halfway through the flight. Walsh flew all the way down to the bottom of the airspace, then revved the engine and sped up to 650 mph. I strained

through a 7g pull into the vertical, and we corkscrewed straight up. I felt the Gs ease and took a deep breath as Walsh rolled the aircraft onto its back. He told me to look over my shoulder; behind us, I watched the aircraft's contrails slowly fading.

We were nearing the end of the flight. I had been briefed on what was coming: the 9g turn. I took another huge gulp of air and squeezed as hard as I could, waiting for the signature phrase:

"Here come the Gs!"

Walsh banked 90 deg. and pulled a gut-wrenching right turn, stressing the fighter to its limit. I grunted through the Gs, making sure to space out my breaths. It lasted only about 10 sec. "Piece of cake," I thought.

Minutes later, I almost passed out. To cap off the flight, we executed the Thunderbirds' most physically demanding maneuver: the "max-turn, half-Cuban eight." Walsh banked 90 deg. again, this time to the left, and pulled a full, stomach-churning, 360-deg. turn at about 7.5g. But the move wasn't over. As Walsh rolled out and immediately thundered up into the vertical at around 8g, I felt the edges of my vision go gray. Strangely, my mental capacity was still fully intact.

"Maybe I'll get geasles," I thought, envisioning the little red bumps that pop up on fighter pilots' limbs when G forces cause capillaries to rupture. At that moment, it seemed like a well-deserved badge of honor.

In the end, I didn't have to eject. After landing safely, I wriggled out of the harness and climbed down from the jet, physically drained but elated. Standing next to Thunderbird No. 7 in front of the aircraft, the crew presented me with a framed photo of the Thunderbirds flying formation and a certificate documenting my flight.

Below the type, Walsh had signed his name and written, "9.0G!!" It's not quite as cool as geasles, but I'll take it.