

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



ERA23FA108

MEDICAL

Specialist's Factual Report

May 26, 2023

A. ACCIDENT

Location: Dayton, Virginia
Date: January 11, 2023
Time: 18:09 Local
Airplane: Piper PA-32R-301; N43156

B. MEDICAL SPECIALIST

Specialist Michelle Watters, MD, PhD, MPH
National Transportation Safety Board, RE-1
Washington, DC

C. DETAILS OF THE INVESTIGATION

Purpose

This investigation was performed to evaluate the pilot for medical conditions, the use of medications/illicit drugs, and the presence of toxins.

Methods

The Federal Aviation Administration (FAA) medical case review, the pilot's autopsy report, and the FAA Forensic Sciences Laboratory toxicology report¹ were reviewed. Other relevant medical and regulatory issues were reviewed.

D. FACTUAL INFORMATION–PILOT

1.0 FAA Medical Case Review

According to the FAA medical case review, at the time of the accident, the 54-year-old male pilot held a third class medical certificate with the limitation that he must wear corrective lenses. His most recent FAA medical certification exam was on 7/13/22 and at that time he reported he had accrued 1,639 total flight hours. He was 68 inches tall and weighed 183 pounds. He reported taking no medications and having no medical conditions.

2.0 Autopsy

According to the autopsy report from the Office of the Chief Medical Examiner, Commonwealth of Virginia, Manassas, Virginia, the pilot's cause of death was multiple

¹ The FAA Forensic Sciences Laboratory has the capability to test for more than 1,000 substances including toxins, common prescription and over-the-counter medications, and illicit drugs. <https://jag.cami.jccbi.gov/toxicology/>

blunt force injuries, and the manner of death was accident (plane crash). No significant natural disease was identified by the medical examiner.

3.0 Toxicology

Toxicology testing performed by the FAA Forensic Sciences Laboratory detected cetirizine in the pilot's blood at 71 nanograms per milliliter (ng/mL) and in his urine at 3,124 ng/mL.

Cetirizine is a second-generation antihistamine used to relieve hay fever and allergy symptoms. It is available over the counter, commonly marketed as Zyrtec. Although designed to be less sedating than the first generation antihistamines, cetirizine does have some sedating properties. The therapeutic range is between 190 and 1,450 ng/mL; the elimination half-life is between 6.5 and 10 hours.² FAA provides guidance on wait times before flying after using this antihistamine.^{3,4}

E. SUMMARY OF MEDICAL FACTS

The 54-year-old male pilot held a third class medical certificate with the limitation that he must wear corrective lenses. At his most recent FAA medical certification exam on 7/13/22, he reported taking no medications and having no medical conditions. According to the autopsy report, the pilot's cause of death was multiple blunt force injuries, and the manner of death was accident. No significant natural disease was identified by the medical examiner. Toxicology testing detected cetirizine in the pilot's blood at 71 nanograms per milliliter (ng/mL) and in his urine at 3,124 ng/mL.

Submitted by:

Michelle Watters, MD, PhD, MPH
Medical Officer, RE-1

² FAA. Updated 1/16/19. Forensic Toxicology Drug Information.

Cetirizine. <https://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=131>

³ FAA. 11/13/19. What over-the-counter (OTC) medications can I take and still be safe to fly?
OK-20-0302

https://www.faa.gov/licenses_certificates/medical_certification/media/OTCMedicationsforPilots.pdf

⁴ FAA. Updated 10/26/22. [AllergyAntihistamineImmunotherapyMedication.pdf \(faa.gov\)](#)