



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

December 18, 2018

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Chief Medical Officer

A. ACCIDENT: ERA18FA127; Crozet, VA

On April 15, 2018, at 2054 eastern daylight time, a Cessna 525, N525P, was destroyed after it impacted terrain near Crozet, Virginia. The private pilot was fatally injured. The flight was operated by an individual under the provisions of Title 14 Code of Federal Regulations Part 91 as a personal flight. Night instrument meteorological conditions prevailed, and there was no flight plan filed for the flight, which departed Richmond Executive – Chesterfield County Airport (FCI), Richmond, Virginia, around 2035, and was destined for Shenandoah Valley Regional Airport (SHD), Weyers Cave, Virginia.

B. GROUP IDENTIFICATION

No group was formed for the medical evaluation in this accident.

C. DETAILS OF INVESTIGATION

1. Purpose

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

2. Methods

The FAA medical case review, autopsy report, toxicology findings, report of interviews with the pilot's girlfriend, and the investigator's reports were reviewed.

FAA Medical Case Review

According to the FAA medical case review, the 51 year old male pilot had reported 1,900 total hours of flight experience as of his last aviation medical exam, dated 11/30/2016. At that time, he was 71 inches tall and weighed 181 pounds. The pilot had reported no chronic medical conditions and no medication use to the FAA. No abnormalities were

identified on the exam and he was issued a third class medical certificate limited by a requirement to wear corrective lenses.

Autopsy

According to the autopsy performed by Commonwealth of Virginia Department of Health, Office of the Chief Medical Examiner, Central District, the cause of death was blunt force injuries to the head, torso, and extremities. The examination was limited because the remains were fragmented; no brain, heart, or other organs were available for examination.

Toxicology

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory was performed on the only available specimen, muscle tissue, and identified ethanol at 0.080 gm/hg and cetirizine.¹

Ethanol is the intoxicant commonly found in beer, wine, and liquor. It acts as a central nervous system depressant. After ingestion, at low doses, it impairs judgment, psychomotor functioning, and vigilance; at higher doses it can cause coma and death. The effects of ethanol on aviators are generally well understood; it significantly impairs pilots' performance, even at very low levels.² Federal Aviation Regulations, Section 91.17 (a) prohibits any person from acting or attempting to act as a crewmember of a civil aircraft while having 0.040 gm/dl or more ethanol in the blood.³ Because ingested alcohol is distributed throughout the body, levels from different post mortem tissues are usually similar. Ethanol may also be produced in body tissues by microbial activity after death.⁴

Cetirizine is a sedating antihistamine available over the counter and by prescription, often marketed with the name Zyrtec. It carries this warning for patients, "When using this product, drowsiness may occur, avoid alcoholic drinks, alcohol, sedatives, and tranquilizers may increase drowsiness, and be careful when driving a motor vehicle or operating machinery."⁵

¹ Results are given in gm/hg because the test was performed on solid tissue. This level translates directly to a blood level of 0.080 gm/dl.

² Cook, C.C., Alcohol and aviation. Addiction (Abingdon, England), 1997. 92(5): 539-555.

³ US Government Printing Office .eCFR- Code of Federal Regulations. 91.17. <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div8&node=14:2.0.1.3.10.1.4.9>. Accessed 6/16/2016.

⁴ Federal Aviation Administration. Forensic Toxicology Drug Information. Ethanol. <http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=60> Accessed 12/02/2016.

⁵ National Institutes of Health. US National Library of Medicine. DailyMed. Cetirizine. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=a5be7921-c1cb-4b9f-9f4a-1c4b68b2b8a3> Accessed 12/17/2018.

D. SUMMARY OF MEDICAL FINDINGS

The 51 year old male pilot had reported no chronic medical conditions or medication use to the FAA.

According to the autopsy performed by Commonwealth of Virginia, Department of Health, Office of the Chief Medical Examiner, Central District, the cause of death was blunt force injuries to the head, torso, and extremities and the manner of death was accident.

Toxicology testing performed on the only available specimen, muscle tissue, identified ethanol at 0.080 gm/hg and cetirizine.