



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

October 15, 2015

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Chief Medical Officer

A. ACCIDENT:

On October 10, 2013, about 1209 eastern daylight time, a Cessna 340A, N4TK, collided with the terrain when the pilot lost aircraft control while maneuvering in the vicinity of Hampton Roads Executive Airport (PVG), Norfolk, Virginia. The commercial pilot and three passengers were fatally injured. The airplane was located in a marsh area and was destroyed by impact forces. The airplane was registered to and operated by the pilot under the provisions of 14 Code of Federal Regulations Part 91, as a personal flight. Instrument meteorological conditions prevailed and an instrument flight rules flight plan was filed. The flight originated from Fort Lauderdale Executive (FXE), Fort Lauderdale, Florida, about 0743.

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 any medical conditions, the use of any medications/illicit drugs, and the presence of any toxins.

2. Methods

The FAA medical case review, toxicology results, autopsy report, and the investigator's reports were reviewed.

FAA Medical Case Review

According to the FAA medical case review, the 61 year old pilot held a second class medical certificate limited by the need for corrective lenses. The pilot had reported having diabetes to the FAA since 1998 but had not ever reported using any medications to control the disease. On his most

recent aviation medical exam, dated 06/03/2013, he reported no medications and his urinalysis was negative for glucose. At that time, he was 71 inches tall, weighed 195 lbs. and reported his flight experience included 4256 total flight hours. The pilot was issued a Class 2, Medical Certificate – limited by the requirement for available glasses for near vision. No amplifying information was reported regarding his diabetes on the 2013 exam. In addition, the pilot reported having had cataract surgery in 2012 but his corrected near, far, and intermediate vision was 20/20 in both eyes.

The FAA medical case review also reported the pilot had undergone two separate aviation medical examinations a week apart in June, 2011. At the first exam, the AME deferred his medical certificate because he had 3+ glucose in his urine (normal is no glucose); follow up testing revealed a blood glucose of 331 mg/dl (normal is 65-99 mg/dl) and a HgbA1C (Hemoglobin A1C) level of 13.1% (normal is below 5.6%).¹ The pilot went to another AME a week later and did not disclose the most recent AME evaluation/deferred certificate. On the second exam, the urine was reported as negative for glucose and the pilot was awarded a medical certificate. The FAA did not follow up on this information.

Autopsy

According to the autopsy report from the Office of the Chief Medical Examiner in Tidewater VA, the cause of the pilot's death was multiple blunt force injuries and the manner of death was accident. The autopsy was significantly limited by the degree of damage to the body, which was highly fragmented. No internal organs, particularly heart or brain, could be identified. In addition, no specimens of blood, urine, organ tissue, or vitreous were available.

Toxicology

Toxicology testing of muscle performed by the Commonwealth of VA Department of Forensic Science identified ethanol at 0.02%. Ethanol is the type of alcohol that may ingested as a component of beer, wine, or liquor; by regulation pilots may not fly with blood levels of ethanol above 0.04%.

Toxicology testing of muscle by the FAA's Bioaeronautical Research Lab identified ethanol at 0.073% and also identified n-butanol and n-propanol. Ethanol, n-butanol, and n-propanol are alcohols that can be produced in human tissue by microbial action after death. No suitable specimens were available for glucose or other clinical testing.

¹ Hemoglobin A1C is a measure of glucose control over the preceding six weeks. Below 5.6% is considered non-diabetic, above 6.5% is diagnostic of diabetes, and "good" control of diabetes is a result below 7%. Poor control is any result above 10%.

D. SUMMARY OF FINDINGS

The 61 year old male pilot in this accident was known to have had diabetes for many years. On at least on occasion, testing revealed the condition was poorly controlled with a Hemoglobin A1C above 13%. Following that, urine dip testing for glucose was reported as negative by the aviation medical examiner and the pilot was awarded second class medical certificates. The examination of the pilot's body was limited by the severity of his injuries and only muscle tissue was available for toxicology testing. Muscle specimens were tested in two laboratories and results identified ethanol at 0.02% and 0.073%; in addition at the FAA Bioaeronautical Research Lab, n-butanol and n-propanol were also identified.