



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

May 16, 2022

Mary Pat McKay, MD, MPH
Chief Medical Officer

A. CRASH: ERA22FA137; Hilltown Township, PA

Date and time: February 23, 2022

Injuries: 2 fatal

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 and certified flight instructor for medical conditions, the use of medications/illicit drugs, and the presence of toxins.

2. Methods

The FAA medical case review, autopsy reports, toxicology findings, and the investigator's preliminary report were reviewed. Relevant regulation and medical literature were reviewed as appropriate.

Pilot

FAA Medical Case Review

According to the FAA medical case review, the 55 year old male pilot had reported 320 total flight hours as of his last aviation medical exam, dated 4/3/2020. At that time, he was 69 inches tall and weighed 175 pounds. He had reported no chronic medical conditions and no use of medications to the FAA. No significant abnormalities were identified, and he was issued a third class medical certificate without limitations.

Autopsy

According to the autopsy report issued by Buck's County Coroner's Office, the cause of death was multiple blunt injuries. The examination was significantly limited by the extent of injury; no brain tissue was available and the examination of the heart was limited.

Toxicology

Toxicology testing performed by the FAA's Forensic Sciences Laboratory did not identify any tested-for substances.

Certified Flight Instructor (CFI)

FAA Medical Case Review

According to the FAA medical case review, the 74 year old male CFI had reported 11,356 total flight hours as of his last aviation medical exam, dated 10/5/2021. At that time, he was 69 inches tall and weighed 192 pounds. He had reported no chronic medical conditions and no use of medications to the FAA. No significant abnormalities were identified, and he was issued a third class medical certificate limited by a requirement he wear corrective lenses.

Autopsy

According to the autopsy report issued by Buck's County Coroner's Office, the cause of death was multiple blunt injuries. The examination was significantly limited by the extent of injury; no brain tissue was available, and the examination of the heart was very limited; specifically, no evaluation of the coronary arteries, the presence of stents, or the quality of the myocardium was carried out.

Toxicology

Toxicology testing performed by the FAA's Forensic Sciences Laboratory identified ethanol at 0.016 gm/dl in liver tissue but none in muscle; metoprolol was identified in both tissues.

Substance Descriptions

Ethanol is primarily a social drug found in beer, wine, and liquor and is a central nervous system depressant. 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.¹ After ingestion, ethanol is quickly distributed throughout the body's tissues and fluids fairly uniformly. The distribution pattern parallels the water content and blood supply of each organ. Ethanol may

¹ US Government Printing Office .eCFR- Code of Federal Regulations. 91.17. Available from: <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div8&node=14:2.0.1.3.10.1.4.9>. Accessed 4/14/2016

also be produced body tissues after death by microbial activity.² In this situation, levels may vary widely.

Metoprolol is a beta blocking drug used to treat high blood pressure, control heart rate in some arrhythmias, and prevent recurrent heart attacks.³ It is not generally considered impairing.

D. SUMMARY OF MEDICAL FINDINGS

Pilot

The 55 year old male pilot had reported no chronic medical conditions and no use of medications to the FAA.

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² Federal Aviation Administration. Forensic Toxicology Drug Information. Ethanol. <http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=60> Accessed 03/02/2019.

³ National Institutes of Health, US National Library Of Medicine. DailyMed. Metoprolol. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=58441cd3-6043-4bb8-adab-1b32a203bfb2> Accessed 5/12/2022.