



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report **May 19, 2022**

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Medical Officer

A. ACCIDENT: ERA22FA014 – Blairsville, Georgia

Date/Time: October 13, 2021; 8:16 a.m. (EDT)
Aircraft: Piper PA-24-260, N9126P
Injuries: 1 Fatal
Flight Conducted under Part 91 personal flight.

B. GROUP IDENTIFICATION

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

C. DETAILS OF 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 and the pilot's autopsy and Forensic Sciences Laboratory toxicology¹ reports were reviewed. Other pertinent scientific and regulatory issues were reviewed.

FAA Medical Case Review

According to the FAA medical case review, at the time of the accident, the 71-year-old male pilot had a medical certificate that expired for all classes in 2019. He had completed his BasicMed requirements on 2/9/21. At the time of the most recent FAA medical certification exam (7/14/17), the pilot was 70 inches tall and weighed 174 pounds. He reported having 929 civil flight hours. He reported taking no medications and having hay fever. No significant medical concerns were identified and he was issued a second class medical certificate without limitations.

¹ The FAA Forensic Sciences Laboratory has the capability to test for more than 1,300 substances including toxins, common prescription and over-the-counter medications, and illicit drugs. <https://jag.cami.jccbi.gov/toxicology/>

Autopsy

According to the Division of Forensic Sciences, Georgia Bureau of Investigation autopsy report, the cause of death of the pilot was multiple generalized blunt force injuries and the manner of death was accident. The examination was limited by the injuries, no brain was available for examination. The medical examiner identified extensive non-occlusive calcified atherosclerosis in the pilot's coronary arteries and ulcerative atherosclerosis in his aorta.

Toxicology testing performed by the FAA Forensic Sciences Laboratory detected ethanol in the pilot's liver tissue at 0.013 grams per hectogram (gm/hg),² ethanol was not detected in his muscle tissue. The high blood pressure medication amlodipine was detected in his liver and muscle tissue; this medication is generally considered non-impairing.³

Ethanol is a social drug commonly consumed by drinking beer, wine, or liquor. It acts as a central nervous system depressant; it impairs judgment, psychomotor functioning, and vigilance. Ethanol is water soluble, and after absorption it quickly and uniformly distributes throughout the body's tissues and fluids. The distribution pattern parallels water content and blood supply of the tissue. Ethanol can be produced after death by microbial activity; sometimes in conjunction with other alcohols. Extensive trauma increases the spread of bacteria and raises the risk of ethanol production after death.⁴

D. SUMMARY OF MEDICAL FINDINGS

The 71-year-old male pilot was on BasicMed; he completed his requirements on 2/9/21. At the time of the most recent FAA medical certification exam (7/14/17), he reported no medical conditions and having hay fever. According to the autopsy, the cause of the pilot's death was multiple generalized blunt force injuries and the manner of death was accident. The examination was limited by the injuries, no brain was available for examination. Autopsy findings for the pilot included extensive non-occlusive calcified atherosclerosis in his coronary arteries and ulcerative atherosclerosis in his aorta.

Toxicology testing detected ethanol in the pilot's liver tissue at 0.013 gm/hg; ethanol was not detected in his muscle tissue. The non-impairing high blood pressure medication amlodipine was detected in his liver and muscle tissue.

² Grams per hectogram in tissue samples are directly comparable to grams per deciliter in liquid samples.

³ National Institutes of Health (NIH). U.S. National Library of Medicine (NLM). Updated 1/15/21. [DailyMed - AMLODIPINE BESYLATE- amlodipine besylate tablet \(nih.gov\)](https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?id=69731)

⁴ Kugelberg, FC and AW Jones. 2007. Interpreting results of ethanol analysis in postmortem specimens: a review of the literature. *Forensic Science International* 165(1):10-29.