

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



ERA22FA376

MEDICAL

Specialist's Factual Report

April 12, 2023

A. ACCIDENT

Location: Glendora, Mississippi
Date: 8/19/2022
Time: 10:30 Local
Airplane: Air Tractor AT-602; N602PB

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 certification file, initial FAA medical case review, the pilot's autopsy report, FAA Forensic Sciences Laboratory toxicology report,¹ and pre-event medical records were reviewed. Other relevant medical and regulatory issues were reviewed.

D. FACTUAL INFORMATION—PILOT

1.0 FAA Medical Certification File and FAA Medical Case Review

According to the FAA medical certification file and initial FAA medical case review, at the time of the accident, the 70-year-old male pilot held a second class medical certificate with the limitation that he must wear corrective lenses for near and distant vision. At the time of his most recent exam (12/23/21), the pilot was 70 inches tall and weighed 189 pounds. He reported having 32,500 total flight hours. He reported taking no medications and having no medical conditions. No significant medical concerns were identified in this or his FAA medical certification examinations dating back to 1975.

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/>

2.0 Autopsy

According to the autopsy report from the Mississippi State Medical Examiner's Office, Pearl, Mississippi, the pilot's cause of death was blunt force injuries due to plane crash, and the manner of death was accident. No significant natural disease was identified.

3.0 Toxicology

Toxicology testing by the FAA Forensic Sciences Laboratory detected meclizine at 21.6 nanograms per milliliter (ng/mL) in the pilot's femoral blood and in his urine. *Meclizine* is an antihistamine available over the counter to prevent symptoms of motion sickness such as nausea, vomiting, and dizziness or by prescription to treat vertigo associated with diseases affecting the vestibular system. The therapeutic range of meclizine is 10 to 100 ng/mL, and its half-life is about 5 to 6 hours. Meclizine can cause drowsiness and may impair the mental or physical ability to perform potentially hazardous tasks such as driving or operating heavy machinery.^{2,3} The FAA does not allow the use of this medication chronically or within 36 hours of flying.⁴

4.0 Pre-Event Medical Records

Pre-event medical records for the pilot for the three years prior to the accident were obtained. His most recent visit to his primary care doctor was on 12/16/21. At that visit, his physician reported that the pilot's high cholesterol and high blood pressure were under control without medication. Under the history of the present illness, the pilot was noted to have a history of congestion with episodes of vertiginous dizziness post flu shot. He had a history of recurrent sinusitis. On physical exam, he was reported to have decreased hearing, postnasal drip, and nasal mucosal edema. He was prescribed an antihistamine/decongestant combination medication and an antibiotic. His medication list included a prescription for a scopolamine transdermal patch⁵ that was filled on 9/28/21.

² FAA. Updated 1/16/19. Forensic Toxicology's WebDrugs. Meclizine.
<https://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=155>

³ National Institutes of Health (NIH). U.S. National Library of Medicine (NLM). [DailyMed - MECLIZINE HYDROCHLORIDE- meclizine tablet MECLIZINE HYDROCHLORIDE tablet \(nih.gov\)](#)
Updated 12/30/20.

⁴ FAA. 11/23/22. *Guide for Aviation Medical Examiners*. Pharmaceuticals (Therapeutic Medications) Do Not Issue - Do Not Fly.
https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/pharm/dni_dnf/

⁵ Scopolamine transdermal patches are indicated for the prevention of nausea and vomiting associated with motion sickness. The use of the medication can cause drowsiness and blurred vision. Patients should be informed not to operate motor vehicles until they are reasonably certain that scopolamine does not affect them adversely. [NIH. NLM. [DailyMed - SCOPOLAMINE patch \(nih.gov\)](#)
Updated 6/3/19.]

E. SUMMARY OF MEDICAL FACTS

The 70-year-old male pilot held a second class medical certificate with the limitation that he must wear corrective lenses for near and distant vision. At the time of his most recent exam (12/23/21), he reported taking no medications and having no medical conditions. According to the autopsy, the pilot's cause of death was multiple blunt force injuries due to plane crash, and the manner of death was accident. No significant natural disease was identified. Toxicology testing detected meclizine at 21.6 nanograms per milliliter (ng/mL) in the pilot's femoral blood and in his urine. Based on pre-event medical records, the pilot had a history of recurrent sinusitis, high cholesterol, and high blood pressure. At his most recent visit on 12/16/21, he reported having congestion with episodes of vertiginous dizziness.

Submitted by:

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