

National Transportation Safety Board

Office of Research and Engineering

Washington, DC 20594



WPR22FA255

MEDICAL

Specialist's Factual Report

December 26, 2023

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A. ACCIDENT

Location: Lake McMurray, Washington
Date: July 16, 2022
Time: 07:15 Pacific Daylight Time

B. MEDICAL SPECIALIST

Specialist J.E. Tuttle MD MHA FACS
National Transportation Safety Board
Washington, DC

C. DETAILS OF THE INVESTIGATION

1.0 Purpose

This investigation was performed to evaluate the pilot for potentially impairing substances and potentially impairing medical conditions.

2.0 Methods

The Federal Aviation Administration (FAA) medical case review and the pilot's autopsy and toxicology reports were reviewed. Selected investigator reports and relevant regulation and medical literature were also reviewed.

D. FACTUAL INFORMATION

1.0 FAA Medical Case Review

According to the FAA medical case review, the 76-year-old male pilot's last aviation medical examination was on December 29, 2016. At that time, he reported 2280 total civilian flight hours. He was 68 inches tall and weighed 183 pounds. He reported using niacin (a vitamin commonly used to treat high cholesterol), a multivitamin, omeprazole (a stomach acid suppressant medication available over the counter), lisinopril (a prescription medication commonly used to treat high blood pressure), atorvastatin (a prescription medication commonly used to manage high cholesterol) and aspirin (an over-the-counter anti-inflammatory medication commonly used to relieve pain and fever and to reduce cardiovascular risk). These medications are not generally considered impairing. The pilot also reported a history of coronary artery disease with a coronary artery stent (placed in 1998), hypertension, diet-controlled diabetes, acid reflux, and prostate cancer treated with external beam

radiation. The pilot was issued a third-class medical certificate by Special Issuance, limited by a requirement to wear corrective lenses for near and distant vision, and not valid for any class after December 31, 2017. The pilot completed a BasicMed Comprehensive Medical Examination Checklist (CMEC) in December 2017, and a BasicMed Course in April 2018.¹ At the time of the accident, these were expired, and the pilot did not hold a valid medical certificate.²

According to the medical case review, the pilot had received an authorization for Special Issuance of medical certification for angina and coronary artery disease requiring coronary artery angioplasty and stent placement with medication use. The first issuance of this authorization had been in 2002, and the last had been in 2017. Prostate cancer had been included in the authorization beginning in 2014.

2.0 Autopsy

Pacific Northwest Forensic Pathology, Tacoma, Washington, performed the pilot's autopsy at the request of the Skagit County Office of the Coroner, Mount Vernon, Washington. According to the pilot's autopsy report, his cause of death was thermal injury and inhalation of products of combustion, and his manner of death was accident. The heart examination revealed multivessel atherosclerotic coronary disease, with 80-90% narrowing of the left main and left anterior descending coronary arteries, a significant restenosis of a left anterior descending coronary artery stent, and more than 95% narrowing of the right coronary artery. The heart muscle had an area of scarring in the posterior left ventricle and interventricular septum consistent with old injury from insufficient blood flow. Microscopic examination of the right coronary artery showed moderate to marked narrowing with plaque and calcification; no acute clot or plaque rupture were identified. Microscopic examination of the heart muscle showed mild enlargement of the muscle cells and mild interstitial fibrosis. The remainder of the autopsy examination, including of the heart, did not identify other significant natural disease. In the autopsy report, the pathologist noted that the pilot's family had indicated that the pilot had had no new health complaints in the weeks prior to the accident.

¹ BasicMed provisions allow pilots who meet certain requirements to fly without current medical certification. Among those requirements, a pilot must have completed a BasicMed training course within 24 calendar months and must have had a medical examination with a state-licensed physician using the CMEC within 48 months. Aircraft and operating restrictions also apply. For details, see 14 Code of Federal Regulations (CFR) Part 68, 14 CFR 61.113(3) and https://www.faa.gov/licenses_certificates/airmen_certification/basic_med/).

² According to the NTSB investigator in charge, the pilot was operating a light sport aircraft. FAA medical certification is not required for a pilot to exercise sport pilot privileges if other required qualifications and operating restrictions are met. For additional information, see [14 Code of Federal Regulations Part 61 Subpart J](#).

3.0 Toxicology

3.1 FAA Toxicology Result

The FAA Forensic Sciences laboratory performed toxicological testing of postmortem specimens from the pilot.³ Rosuvastatin was detected in liver tissue. The available blood specimen was unsuitable for carboxyhemoglobin testing.

3.2 Washington State Patrol Toxicology Result

The Office of the Coroner submitted postmortem toxicological specimens to the Washington State Patrol (WSP) Seattle Toxicology Laboratory. WSP testing of peripheral blood for carboxyhemoglobin was unobtainable due to an unsuitable specimen. WSP requested additional testing of liver tissue by NMS Labs; results of this testing were unremarkable.⁴

3.3 Description of Detected Substance

Rosuvastatin is a prescription medication commonly used to treat high cholesterol and reduce cardiovascular risk.⁵ Rosuvastatin is not generally considered impairing.

E. SUMMARY OF MEDICAL FACTS

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³ The FAA Forensic Sciences laboratory has the capability to test for around a thousand substances including toxins, prescription and over-the-counter medications, and illicit drugs.

⁴ The NMS Labs report listed tested-for substances as amphetamines, barbiturates, benzodiazepines, buprenorphine/metabolite, cannabinoids, cocaine/metabolites, fentanyl/acetyl fentanyl, methadone/metabolite, methamphetamine/MDMA, opiates, oxycodone/oxymorphone, phencyclidine, acetone, ethanol, isopropanol, and methanol. None of these substances were detected in the tested tissue. NMS Labs also estimated carboxyhemoglobin based on tissue measurements of iron and carbon monoxide; no abnormal carboxyhemoglobin elevation was identified.

⁵ National Institutes of Health National Library of Medicine. Crestor. DailyMed. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=bb0f3b5e-4bc6-41c9-66b9-6257e2513512>. Updated July 27, 2023. Accessed December 26, 2023.

aspirin (an over-the-counter anti-inflammatory medication commonly used to relieve pain and fever and to reduce cardiovascular risk). These medications are not generally considered impairing. The pilot also reported a history of coronary artery disease with a coronary artery stent (placed in 1998), hypertension, diet-controlled diabetes, gastroesophageal reflux (heartburn), and prostate cancer treated with external beam radiation. The pilot was issued a third-class medical certificate by Special Issuance, limited by a requirement to wear corrective lenses for near and distant vision, and not valid for any class after December 31, 2017. The pilot completed a BasicMed Comprehensive Medical Examination Checklist in December 2017, and a BasicMed Course in April 2018. At the time of the accident, these were expired, and the pilot did not hold a current medical certificate.

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The pilot's autopsy report reported his cause of death was thermal injury and inhalation of products of combustion, and his manner of death was accident. The heart findings revealed significant multivessel atherosclerotic coronary disease, with 80-90% narrowing of the left main and left anterior descending coronary arteries, a significant restenosis of a left anterior descending coronary artery stent, and more than 95% narrowing of the right coronary artery. The heart muscle had an area of scarring in the posterior left ventricle and interventricular septum consistent with old injury from insufficient blood flow. Microscopic examination of the coronary system did not identify any acute clot or plaque rupture. In the autopsy report, the pathologist noted that the pilot's family had indicated that the pilot had had no new health complaints in the weeks prior to the accident.

The pilot's postmortem toxicological testing detected rosuvastatin in liver tissue.

Submitted by:

JE Tuttle MD MHA FACS
National Transportation Safety Board