



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

December 28, 2017

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Chief Medical Officer

A. ACCIDENT: CEN16FA276; Plainfield, IL

On July 21, 2016, about 1114 central daylight time, a Piper PA 30 airplane, N7409Y, impacted terrain during a descent near Plainfield, Illinois. The commercial pilot was fatally injured. The airplane was destroyed during the impact and subsequent fire. The airplane was registered to and operated by the pilot as a 14 Code of Federal Regulations Part 91 personal flight. Day visual meteorological conditions were reported near the accident site about the time of the accident and the flight was not operated on a flight plan. The flight originated from the Upper Cumberland Regional Airport (SRB), near Sparta, Tennessee, and was destined for the Eagle River Union Airport, near Eagle River, Wisconsin.

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, autopsy report, toxicology result, and the investigator's reports were reviewed.

FAA Medical Case Review

According to the FAA files, the 58 year old male pilot had reported 976 total civilian flight hours as of his last medical exam, dated 5/21/2016. At that time, he was 66 inches tall and weighed 175 pounds. He had reported a DUI conviction in 1991 but no chronic medical conditions and no use of

medications to the FAA. No abnormalities were detected on the physical exam and he was issued a third class medical certificate limited by a requirement to wear corrective lenses for distant vision and have glasses for near vision.

Autopsy

According to the autopsy performed by the Coroner's Forensic Pathologist of Will County, Illinois, the cause of death was multiple injuries due to airplane mishap.

Examination of the body for natural disease was limited by the severity of the pilot's injuries; the body was severely fragmented and no portions of brain or heart were recovered.

Toxicology

Toxicology testing performed by NMS Labs at the request of the Coroner identified citalopram and its metabolite desmethylcitalopram in muscle tissue.

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified citalopram, its metabolite N-desmethylcitalopram and trazodone in lung tissue and trazodone in muscle tissue.

Citalopram is a prescription antidepressant often marketed with the name Celexa. It carries this warning, "In studies in normal volunteers, citalopram in doses of 40 mg/day did not produce impairment of intellectual function or psychomotor performance. Because any psychoactive drug may impair judgment, thinking, or motor skills, however, patients should be cautioned about operating hazardous machinery, including automobiles, until they are reasonably certain that citalopram therapy does not affect their ability to engage in such activities."¹

Major depression itself is associated with significant cognitive degradation, particularly in executive functioning.² Because of this, pilots with depression require specific evaluation before medical certification. The FAA's Guide for Aviation Medical Examiners states "The use of a psychotropic drug is disqualifying for aeromedical certification purposes – this includes all antidepressant drugs, including selective serotonin reuptake inhibitors (SSRIs). However, the FAA has determined that

¹ National Institutes of Health. US National Library of Medicine. Citalopram. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=6daeb45c-451d-b135-bf8f-2d6dff4b6b01> Accessed 12/28/2017.

² Snyder HR. Major depressive disorder is associated with broad impairments on neuropsychological measures of executive function: A meta-analysis and review. Psychol Bull. 2013;139(1):81-132.

airmen requesting first, second, or third class medical certificates while being treated with one of four specific SSRIs may be considered (see Item 47., Psychiatric Conditions – Use of Antidepressant Medications). The Authorization decision is made on a case by case basis. The Examiner may not issue.”³ The four potentially allowable antidepressants are fluoxetine (Prozac), escitalopram (Lexapro), sertraline (Zoloft), and citalopram (Celexa).⁴

Trazodone is another prescription antidepressant that is significantly sedating; it is often used as a sleep aid. It carries this precaution, “Antidepressants may impair the mental and/or physical ability required for the performance of potentially hazardous tasks, such as operating an automobile or machinery; the patient should be cautioned accordingly. Trazodone hydrochloride may enhance the response to alcohol, barbiturates, and other CNS depressants.”⁵

D. SUMMARY OF MEDICAL FINDINGS

The 58 year old male pilot had reported no medical conditions or use of medications to the FAA. According to the autopsy performed by the Coroner's Forensic Pathologist of Will County, Illinois, the cause of death was multiple injuries due to airplane mishap. Examination of the body for natural disease was limited by the severity of the pilot's injuries; the body was severely fragmented and no portions of brain or heart were recovered. Toxicology testing identified citalopram, its metabolite N-desmethylescitalopram, and trazodone in lung tissue and muscle tissue.

³ Federal Aviation Administration. Airman Medical Examiner's Guide, 2016. http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/media/guide.pdf Pg. 211. Accessed 1/15/2016

⁴ Federal Aviation Administration. Aviation Medical Examiner's Guide, 2016. SSRI Decision Path 1. http://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/media/SSRI%20Decision%20Path%20-%20I.pdf Accessed 1/16/2016.

⁵National Institutes of Health. US National Library of Medicine. Trazodone. <https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=a699724b-7412-479e-9894-4cf6ec454d8b> Accessed 12/28/2017.