



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

September 22, 2014

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Medical Officer

A. ACCIDENT: WPR13FA056 - Scio, Oregon

On November 26, 2012, at 1537 Pacific standard time, a McDaniel RV-6-CH, N424D, collided with terrain after its right wing departed the airplane 5 miles south of Scio, Oregon. The private pilot and the pilot rated passenger were both fatally injured. According to a witness, the flight was planned so that the pilot rated passenger could demonstrate rolls to the pilot / owner. The pilot rated passenger was found in the left seat.

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's medical conditions, use of medications/illicit drugs, and the presence of any toxins.

2. Methods

The FAA medical case review, toxicology and autopsy reports, and the investigator's reports were reviewed.

a. The Private Pilot – Right Seat

i. FAA Medical Review

The pilot was a 46-year-old male who was 68 inches tall and weighed 178 pounds on his FAA medical certification examination dated April 02, 2012. The exam was remarkable only for a history of prostate cancer in remission, treated with robotic resection of the prostate. Tests revealed no detectable levels of prostatic specific antigen around the time of his examination. The FAA issued the pilot a special issuance third class medical certificate that was not valid for any class after April 30, 2013. The review identified no other current significant

medical issues.

ii. Autopsy

The medical examiner determined that the cause of death was crushing blunt force injuries of head and chest and the manner of death was accident. No underlying natural disease was identified.

iii. Toxicology

Toxicology testing performed by the FAA's Civil Aerospace Medical Institute found 0.020 ug/ml of ethanol in muscle but no ethanol in brain.¹ In addition, 0.604 ug/ml of diphenhydramine was detected in the cavity blood and diphenhydramine was also detected in muscle. Diphenhydramine is a sedating antihistamine used to treat allergy symptoms and as a sleep aid. It is available over the counter under various trade names including Benadryl and Unisom.

Diphenhydramine carries the following warning: may impair mental and/or physical ability required for the performance of potentially hazardous tasks (e.g., driving, operating heavy machinery). The therapeutic range for the drug is from 0.0250 to 0.1120 ug/ml.²

b. The Pilot Rated Passenger - Left Seat

i. FAA Medical Review

The pilot rated passenger was a 45-year-old obese male who was 68 inches tall and weighed 241 pounds on his FAA medical certification exam dated May 25, 2012. The pilot report no medical concerns on his FAA physical examination. The pilot was issued a second class medical certificate with the limitation: "must wear corrective lenses."

ii. Autopsy

The medical examiner determined the cause of death was craniocerebral and chest trauma and the manner of death was accident. No underlying natural disease was identified.

iii. Toxicology

Toxicology testing performed by the FAA's Civil Aerospace Medical Institute detected no carbon monoxide in the blood, no ethanol in the liver or brain, and was otherwise negative for drugs.

D. SUMMARY OF FINDINGS

The pilot had a history of treated prostate cancer in remission and no other current significant medical issues. Toxicology testing detected 0.604 ug/ml of diphenhydramine in the cavity blood and it was also identified but not quantified in muscle. The pilot rated passenger had not reported any medical issues to the FAA on his most recent exam, and had no natural disease identified by autopsy, and his toxicology testing was negative.

References

¹ Federal Aviation Administration. Forensic Toxicology Drug Information. Ethanol.
<http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=60> Accessed 9/22/2014.

² Federal Aviation Administration. Forensic Toxicology Drug Information. Diphenhydramine.
<http://jag.cami.jccbi.gov/toxicology/DrugDetail.asp?did=50> Accessed 9/22/2014.