



RECORD OF EMAIL

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Date: February 23, 2021
Person Contacted: Dr. Michelle Watters, NTSB
NTSB Accident Number: WPR20LA152

Narrative:

I reviewed the Federal Aviation Administration (FAA) medical case review, the student pilot's autopsy, and FAA Forensic Sciences Laboratory toxicology^[1] reports. I also reviewed relevant medical information.

Reports provided

According to the FAA medical case review, the 38-year-old male student pilot held a third class medical certificate without limitations. His most recent and only FAA medical certification exam was on 12/24/19 and at that time he reported he had accrued 30 total flight hours. He was 73 inches tall and weighed 209 pounds. He reported taking no medications and having no medical conditions. He reported a remote history of a DUI. No other medical concerns or issues were identified.

According to the Santa Barbara County Sheriff-Coroner's Office, Santa Barbara, California autopsy report, the cause of the student pilot's death was multiple traumatic injuries and the manner of death was accident. While the examination was limited by extensive injuries, no significant natural disease was identified by the medical examiner.

Toxicology testing performed for the Santa Barbara Sheriff-Coroner's Office detected ethanol at less than 0.02 grams per deciliter (gm/dL) in the student pilot's heart blood. The FAA Forensic Sciences Laboratory detected ethanol in his blood at 0.011 gm/dL and brain tissue at 0.019 grams per hectogram;^[2] no ethanol was detected in student pilot's liver tissue. Tissue samples were reported as exhibiting putrefaction. The FAA laboratory also detected the sedating antihistamine chlorpheniramine in the pilot's blood and liver tissue.

^[1] See <https://jag.cami.jccbi.gov/toxicology/> for a complete list of tested-for substances.

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

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.^[3]

Chlorpheniramine is used to temporarily relieve symptoms of allergies and colds such as runny nose or watery eyes. It is available in over-the-counter cold medications. Product packaging for chlorpheniramine includes the warning that drowsiness may occur and to use caution when driving a motor vehicle or operating machinery.^[4] FAA provides guidance on wait times before flying after using this medication.^[5]

Michelle Watters, MD, PhD, MPH
Medical Officer
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END.

^[3] 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.

^[4] NIH NLM. DailyMed. Chlorpheniramine. Updated 4/23/19.
<https://dailymed.nlm.nih.gov/dailymed/drugInfo.cfm?setid=8ffa168c-fe8a-4cd0-978d-c23678171e3f>

^[5] FAA. 11/13/19. What over-the-counter (OTC) medications can I take and still be safe to fly? OK-20-0302
https://www.faa.gov/licenses_certificates/medical_certification/media/OTCMedicationsforPilots.pdf