



NATIONAL TRANSPORTATION SAFETY BOARD

Office of Research and Engineering
Washington, DC

Medical Factual Report

April 3, 2018

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Chief Medical Officer

A. ACCIDENT: ERA17FA172; Colton, NY

On May 3, 2017, about 2030 eastern daylight time, a Piper PA-31, Canadian registration CGQAM, impacted trees and terrain near Colton, New York. The Canadian commercial pilot, and sole occupant, was fatally injured. The airplane was destroyed. The airplane was registered to and operated by Strait Air (2000) Ltd. as a Canadian Aviation Regulation 703 air taxi flight. Visual meteorological conditions prevailed at the accident site and along the route of flight about the time of the accident, and the flight was operated on a visual flight rules flight plan. The flight originated from Quebec/Jean Lesage International Airport (CYQB), Quebec, Quebec, Canada, at 1916, and was destined for Montreal Saint-Hubert Longueuil Airport (CYHU), Saint Hubert, Quebec, Canada.

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

2. Methods

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

FAA Medical Case Review

According to the FAA medical case review, Transport Canada reported the 35 year old male pilot had a valid category 1 Canadian aviation medical certificate.

Autopsy

According to the autopsy performed at the request of the St. Lawrence County Coroner's Office, the cause of death was exsanguination and the manner of death was accident. No significant natural disease was identified, but the examination was limited by the severity of damage to the body; portions of the brain available for examination had been ejected from the skull.

Toxicology

Toxicology testing performed at the request of the St. Lawrence County Coroner's Office confirmed 1.5 ng/ml of tetrahydrocannabinol (THC, the primary psychoactive substance in marijuana) and 19 ng/ml of its inactive metabolite, 11-carboxytetrahydrocannabinol (THC-COOH) in blood.

Toxicology testing performed by the FAA's Bioaeronautical Sciences Research Laboratory identified 1.9 ng/ml of tetrahydrocannabinol (THC) and 19.6 ng/ml of 11-carboxytetrahydrocannabinol (THC-COOH) in cavity blood. Both were also identified in liver and lung.

Marijuana is a psychoactive drug with therapeutic levels as low as 0.001 ug/ml.¹ According to NHTSA's Drugs and Human Performance Fact Sheets, "It is difficult to establish a relationship between a person's marijuana blood or plasma concentration and performance impairing effects. Concentrations of parent drug and metabolite are very dependent on pattern of use as well as dose. THC concentrations typically peak during the act of smoking, while peak 11-OH THC (THC-COOH) concentrations occur approximately 9-23 minutes after the start of smoking. Concentrations of both analytes decline rapidly and are often < 5 ng/ml at 3 hours."²

D. SUMMARY OF MEDICAL FINDINGS

The 35 year old male pilot held a valid category 1 Canadian medical certificate.

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¹ Federal Aviation Administration. CAMI toxicology Drug Information for: Marijuana
<http://jag.cami.jecbi.gov/toxicology/DrugDetail.asp?did=154> Accessed 1/28/2018.

² NHTSA Drugs and Human Performance Fact Sheets. Cannabis/Marijuana.
https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwiiz5LN2p7aAhWQGnwKHUGeB0wQFggpMAA&url=https%3A%2F%2Fwww.wsp.wa.gov%2Fbreathtest%2Fdocs%2Fwebdms%2FDRE_Forms%2FPublications%2Fdrug%2FHuman_Performance_Drug_Fact_Sheets-NHTSA.pdf&usg=AOvVaw2hKr4jORPztsWEcmYT17UF Accessed 4/2/2018.

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