

From: Webster Nicholas

Sent: Wednesday, October 10, 2018 3:20 PM

To: Schiada Luke

Subject: ERA17FA211 - Federalsburg, Maryland June 25, 2017 - NTSB actual Medical Review [REDACTED]

Luke,

[Here is the Medical Factual information for this event](#)

Millicent,

Thank you for the opportunity to work with you on this event.

You asked us to review this case involving the crash of a powered parachute. The airplane crashed into powerlines shortly after takeoff and the pilot, who was sitting on his unbuckled seatbelt, was thrown from the seat. You said you found no mechanical issues with the airplane. You noted that CAMI toxicology detected a number of potentially impairing prescription medications and the autopsy identified potentially impairing cardiac findings and asked if the issues could have contributed to the accident. However, your investigation found no evidence of impairment.

I reviewed the pilot's FAA medical case review, veterans administration clinic records, autopsy and toxicology reports.

According to the FAA medical case review, the 71-year-old male pilot's most recent FAA medical certification exam was dated March 27, 1984. At that time, he documented he had accumulated 400 total flight hours, and reported no use of medications and that he had no medical conditions. He was issued a third class medical certificate with no limitations. The certificate was no longer valid for operations requiring a medical certificate and the pilot was operating an airplane that did not require a medical certificate.

According to the FAA Bioaeronautical Sciences Research Laboratory toxicology report, testing detected the following medications: albuterol (used to treat wheezing), the furosemide (used to treat fluid overload), valsartan and metoprolol (used to treat high blood pressure), warfarin (a blood thinner), pravastatin (used to treat high cholesterol) and naproxen (a pain medicine). These medications are not considered impairing. Additionally, testing detected the antidepressant paroxetine and the central nervous system depressant anticonvulsant / anti-tremor medication primidone and its metabolite phenobarbital in urine and femoral blood. The primidone femoral blood level of 3.122 ug/ml was within the range that is generally considered therapeutic.

According to State of Delaware Department of Safety and Homeland Security Division of Forensic Science autopsy report, the 71-year-old pilot's cause of death was multiple blunt force injuries and the manner was accident. The pilot's heart was markedly enlarged, and the coronary arteries had almost complete stenoses, however, there was evidence of previous coronary artery bypass surgery and the bypass vessels were patent. Further, the heart muscle had a 3 cm area of fibrosis (scar) in the posterior wall of the left ventricle. Finally, a pacemaker was palpated on the right upper chest but there was no record that its information had been downloaded and lead placement was not described.

According to the pilot's personal medical records, his active medical conditions included: adult onset diabetes treated with insulin, his last hemoglobin A1C was slightly elevated at 7.2% in March 2017 (the target for good control is less than 7%); coronary artery disease treated with a 5-vessel bypass in 2003;

placement of an internal defibrillator - pacemaker in 2011 for atrial fibrillation which was also treated with warfarin; cardiomyopathy and congestive heart failure treated with furosemide and metoprolol; high blood pressure treated with valsartan; depression treated with paroxetine; elevated cholesterol treated with pravastatin; chronic obstructive pulmonary disease treated with albuterol, budesonide, and formoterol. Additionally, he had a tremor treated with the potentially impairing CNS depressant primidone daily since 2015. The records did not include a recent assessment of the pilot's depression or discuss any side effects from the primidone.

Major depression itself is associated with significant cognitive degradation, particularly in executive functioning.^[1] As a result, the FAA requires that pilots with depression be treated and stable for a minimum of 6 months any one of 4 specific generally non-impairing antidepressant medications and undergo additional testing before they can receive a medical certificate.^[2] However, due to potentially impairing effects of paroxetine, it is not one of the FAA's specified antidepressants. Additionally, medical conditions that require treatment with anticonvulsant / anti-tremor medications such as primidone are often impairing as are the treating medications and pilots with these conditions or using these medications are advised not to operate airplanes.^[3]

Thank you

Nick

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^[1] Snyder H. 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.

^[2] Federal Aviation Administration, Guide for Aviation Medical Examiners, Item 47. Psychiatric Conditions - Use of Antidepressant Medications.
https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/app_process/exam_tech/item_47/amd/antidepressants/ Accessed 7/31/2018.

^[3] Federal Aviation Administration, Guide for Aviation Medical Examiners, Pharmaceuticals (Therapeutic Medications) Do Not Issue - Do Not Fly
https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/ame/guide/pharm/dni_dnf/ Accessed 7/31/2018.