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SOUNDING THE ALARM FOR CARBON MONOXIDE (CO) POISONING PREVENTION WITH SENSORCON CO DETECTORS



Although CO poisoning numbers have decreased over the years, the numbers are still high. Dan Bass, a CO poisoning survivor, shares his flight story in hopes of convincing others of how simple prevention is with a reliable, high-quality detector.

Even though CO poisoning is preventable, over 400 people die from this tragedy every year. Because CO is odorless, colorless and tasteless, it is often referred to as the “silent killer”; however, CO poisoning can leave a breadcrumb trail, warning those who are at risk. Dan Bass, a CO poisoning survivor, was made very aware of these clues after facing a two-fold near-death experience.

One cold winter day in Minnesota, Dan set out to begin his international flight to Thunder Bay, Ontario. It was Feb. 2, 2017, and he was on his way to a customer meeting for his manufacturing business. While the average person takes a popular ride-hailing service to the airport and boards a plane, Dan simply drove to his hangar, ran through his pre-flight checklist and hopped into his personal plane for take-off.

THE SYMPTOMS ARE WARNINGS

Once he was en route, Dan experienced tell-tale signs of CO poisoning but disregarded them based on easy justifications that could be chalked up to a few life circumstances. His warnings included a slight headache, assumed to be the result of caffeine deficiency since he hadn't had his normal cup of coffee that morning, and after he had landed and departed the plane, an upset stomach mistakenly attributed to anxiety and nerves.



Sensorcon Industrial PRO Carbon Monoxide Inspector

Dan also experienced some eye discomfort and turned off the heat in hopes of alleviating the irritation. He then used a finger “pulse ox” device to check his blood oxygen level, and it showed an elevated oxygen saturation rate. Because this device cannot discern between CO and oxygen levels, and because CO binds much more strongly than oxygen to the hemoglobin in blood, the reading offered a false positive result and a convincing argument against CO poisoning. His first symptom, the slight headache, triggered a thought of CO poisoning, but with the high-oxygen concentration number, he was persuaded otherwise. Unfortunately,

Dan's plane did not have a CO monitor to give the necessary warning of danger.

During the last 15 minutes of the flight, Dan's head began to hurt. But once he landed at the Canadian airport and cleared customs, the headache was more intermittent throughout the morning. He attended his meeting at the plant site as planned, and at lunch time he had a cup of coffee. After lunch, the headache started to subside and by the time he departed Thunder Bay, the pain had completely faded. Dan continued to attribute the headache to a lack of caffeine.

After leaving Thunder Bay, Dan flew to Duluth to clear customs and had a normal flight with no symptoms. However, as he exited the plane, he felt an intense headache but was able to continue the process of clearing customs. When done, he re-boarded the plane to fly home. Once on the airplane, he tidied up things in the cabin and received his flight plan. While he taxied to the runway, he began to feel anxious again just for a



Dan Bass' Plane Before and After the Crash

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moment. At this point, Dan justified all his symptoms by remembering that his daughter was sick prior to his leaving Minnesota and assuming he was getting what she had. It wasn't until Dan had both a splitting headache and slurred speech that he realized he needed help. But four and half minutes after taking off and putting the plane on autopilot, he passed out as the plane climbed to 4,500 feet and leveled out at that altitude. After an hour and a half, the plane ran out of gas while Dan was unconscious and not able to switch to another fuel tank.

When Dan woke up, he attempted to call air traffic control for landing instructions, but the radio didn't work. Then he noticed how clear the windshield was, and when he reached out to touch it, he realized the glass window wasn't there. The lights wouldn't work, his feet were pinned under the rudder pedal and none of the items he had placed next to him were there anymore. Dan's plane had crashed in the middle of an open field, while he had lost consciousness due to CO poisoning.

FINDING A WAY BACK HOME

After managing to climb out of the plane, a confused Dan stepped out into the bitter cold and managed to put on a coat, but without the ability to zip it. In the 5°F icy weather, he could barely feel his extremities. As he tried to get his bearings, he saw a light in the distance and stumbled toward it only to realize he was probably headed in the wrong direction. So, he turned in another direction while struggling to stay on his feet. Inevitably, he kept falling. With his last descent, he decided to lie down to get warm. As he lay in the snow-covered, plowed field, he saw a helicopter flying back and forth in search of him, but to no avail. Feeling cold, discouraged and alone, Dan gave up hope.

He looked up to the sky and settled into his circumstances. As he gazed at the stars above, Dan could make out the Pleiades alignment of the constellations. This prompted a memory of his wife and a conversation they had had on the way to the hospital to deliver their baby. That night, they saw the Pleiades in the sky and discussed

naming their baby Maia, one of the seven Pleiades sisters in mythology. He says, *"In that moment of looking up at the stars, I remembered who I was—a husband and father—and that was the momentum I needed to get up and try to move again."*

This recollection of his wife and daughter snatched Dan out of despair and gave him the strength to crawl through the snow, brush and eventually a fence surrounding a house, where he frightened the owner by knocking on her window. Fortunately, Dan was rescued and treated for CO poisoning, and he fully recovered to see another day. He lived to tell his story, and with a passion for helping others, he shares valuable insights on how to avoid this silent killer.

DAN'S ADVICE FOR CO PROTECTION

It is important to know the warning signs of CO poisoning and how to protect against it. The following is Dan's advice for CO protection in an aircraft:

- 1. Dan advises placing an electronic digital carbon monoxide detector in the cabin.** A high-resolution detector with parts per million readings is best. Sensorcon detectors accurately measures CO gas concentrations from 0-1999ppm, has an extremely fast response time, and has both visual and audible alarms.
- 2. Know the symptoms and do not ignore or rationalize them.**
 - Upset stomach
 - Dizziness
 - Headaches
 - Vomiting
 - Weakness
 - Chest pain
 - Confusion
 - Bright red lips
 - Pink or pale skin

Dan warns, *"These symptoms are not linear, where they progressively get worse. At some point, your cognitive skills lessen and so you may not realize the symptoms...everyone reacts differently."*

PREPARE WITH CO DETECTORS

Carbon Monoxide detectors are devices that measure the amount of CO in the air and alert those in the area of this deadly chemical. Dan highly recommends Sensorcon Inspector CO detectors. These are durable, professional gas meters for detecting CO. Their portable single gas meters are high-quality sensing products that meet the demands of industrial and professional use. Its features include a large LCD readout screen, visual and audible alarms, positive click buttons, a durable water-proof case and a 2-year battery life. Dan has partnered with Sensorcon to promote their CO detector and values the product for its high-resolution detection in parts per million.

Dan continues to share his story with others in order to teach them how to avoid CO poisoning and convince them of the urgent need for detectors.



For more information about carbon monoxide and flying, visit the FAA website: <https://www.faa.gov/pilots/safety/pilotsafetybrochures/media/cobroforweb.pdf>

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