



The Blue Ridge Poison Center

# Tox Talks

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## OVERVIEW OF MEDIA REPORTS OF SYMPTOMATIC FIRST RESPONDER FOLLOWING POTENTIAL FENTANYL EXPOSURES

### INTRODUCTION

With the recent steady rise in opioid abuse and overdose, exposure to fentanyl and fentanyl analogues has become a concern for first responders. Significantly more potent than morphine, it is possible that pulmonary or dermal exposure to relatively small amounts could potentially lead to opioid toxicity. In recent years there has been an effort by the Drug Enforcement Administration (DEA) to advise about the potential dangers of coming in contact with fentanyl and its analogues. The DEA released a video encouraging individuals to take proper safety precautions, such as wearing gloves and a mask when doing a drug-related search. The DEA also advised drug samples to be taken to a lab for testing rather than testing in the field.<sup>1</sup>

There have been numerous cases reported in the lay media of first responders encountering white powders and developing a wide array of symptoms reported to be due to fentanyl or fentanyl analogues. When these reports are critically reviewed, many of the symptoms encountered were not consistent with opioid toxicity. In addition, not one of these cases had follow-up media reports verifying whether a true exposure to fentanyl or fentanyl analogues did in fact occur. The following gives a brief overview of those reported cases.

### REPORTED CASES

*Case 1:* On May 12, 2017, Chris Green, an officer in East Liverpool, Ohio, pulled over two men suspected of making a drug deal. When pulled over, the men quickly smashed the drugs into the carpet of the car to destroy any evidence.<sup>2</sup> Green searched the car and patted the suspects down, following typical safety protocol with gloves and a mask.<sup>3</sup> The two men were arrested, and Green returned to the police station. Upon returning to the station, another officer told Green that there was some white powder on the back of his sweatshirt. He

proceeded to brush the powder off with his bare hand and within minutes was reported to not feel well. In a later interview, Green said, “I started talking weird. I slowly felt my body shutting down. I could hear them talking, but I couldn’t respond. I was in total shock.”<sup>4</sup> He started to feel light headed, reportedly passed out, and was administered one dose of naloxone at the police station. He was then taken to the hospital by ambulance and given another three doses of naloxone after admission.<sup>2</sup> There was no mention of the time between doses. The suspects later admitted that the powder was likely fentanyl.<sup>4</sup> Three days after the event, the chief police officer said “he’s still got a headache, his chest hurts, he’s lying on the couch. He’s still miserable.”<sup>3</sup> None of the news reports mention Green’s exact symptoms or clinical findings (e.g. vital signs). Additionally, there is no report in open source that confirms that the powder was actually fentanyl.

*Case 2:* Also in May of 2017, the only other case was reported of multiple naloxone doses being administered following a white powder exposure. Police were called to a one car accident. The driver was resisting arrest, so an officer entered the vehicle to search for a form of identification. He was exposed to “a substance the police say was either heroin or fentanyl.” The officer began to have a reported “fast heartbeat and his chest started burning.” EMS administered two doses of naloxone before taking him to the hospital.<sup>5</sup> The exact reason for giving naloxone and the time between doses was not stated.

*Case 3 and 4:* Two other media reported cases highlighted fentanyl exposure with subsequent single dose naloxone administration. The first was a detective in Michigan who brought an unknown white powder back to the sheriff’s department for testing. While performing the tests, the detective began to feel “nauseous and his heart rate increased... his symptoms were similar to those caused by drug exposure.” He was administered one dose of naloxone “as a precaution” and taken to the hospital for treatment.<sup>6</sup> The second case was reported in Harford County, Maryland.<sup>7</sup> Kevin Phillips, a deputy, was working as a shift supervisor, and his team was called to an overdose. He collected a sample of what he thought was heroin while wearing gloves and following all necessary safety precautions. He then asked the victim if there were any more drugs, and he pointed to a slightly open nightstand drawer. Phillips closed the drawer, and a few seconds later his “face started burning [and he] broke out in a sweat.” He began to feel “dizzy and like [he] was going to pass out.” The EMS workers hooked him up to a monitor and found that he had “an elevated pulse and a blood pressure that was ridiculously high” They gave him a dose of naloxone and took him to the hospital for further treatment.<sup>8</sup>

In addition to these cases, there are a number of media reports of fentanyl exposures in which the patient was not administered naloxone.

*Case 1:* A police officer in Nicholasville, Kentucky, arrested two subjects for the possession of illegal drugs, and when leaving the station, he began “vomiting and feeling lightheaded.” He was then taken to the hospital, but was never unconscious and was not administered naloxone. One of the subjects told police that he had probably encountered fentanyl or carfentanyl, prompting other concerned officers to call EMS. There is no report of confirmation that the officer was exposed to fentanyl and no clear medical symptoms were published.<sup>9,10,11</sup>

*Case 2:* A SWAT team in Hartford, CT performed a raid as part of a drug bust. They found about 50,000 bags of heroin, likely laced with fentanyl. It is possible that some of the powder blew into the air during the raid. Afterward, several officers “became dizzy, nauseous; some of them vomited.”<sup>12</sup> Another report says that some of the officers experienced “lightheadedness, nausea, sore throats, and headaches.”<sup>13</sup> All officers were taken to the local hospital for treatment, but there is no report of any receiving naloxone. A doctor in the emergency department stated that they “presented all the symptoms of someone who is exposed to heroin or fentanyl.” Despite this, there is no report of the two suspects

who were in the apartment at the time of the raid and “both covered with heroin bags and raw heroin” exhibiting any overdose symptoms.<sup>12,13</sup>

*Case 3:* Detectives Dan Kallen and Eric Price were searching a home in Atlantic City when they found drug paraphernalia and a bag of white powder. Price opened the bag, performed a field test, and closed the bag. As the bag was closed, a small amount of the powder went into the air. Within seconds, “both detectives became ill.” Kallen said that “it hit [them] like a ton of bricks. It became very difficult to breathe. [Their] hearts were racing. [They] were nauseous, close to blacking out.” Both Kallen and Price were taken to the hospital. Testing showed that the bag contained a mixture of heroin and fentanyl.<sup>14</sup> There is no mention of either officer receiving naloxone.

## CONCLUSIONS

Each of these media-reported instances of first responder fentanyl exposure with subsequent symptoms do not include enough detail to definitively confirm that a true fentanyl or fentanyl analogue exposure with toxicity occurred. Dr. Jeremy Faust, an emergency medicine physician at Brigham and Women’s Hospital in Boston, recently published an opinion piece, commenting on the illegitimacy of Chris Green’s supposed fentanyl overdose. Analyzing Green’s case from a medical perspective, Faust wrote that “fentanyl nor even its uber-potent cousin carfentanil can cause clinically significant effects, let alone near-death experiences, from mere skin exposure.”<sup>15</sup> Dry fentanyl does not absorb into the skin, especially the small amount that would have been on Green’s sweatshirt. It is possible that Green’s overdose symptoms were the result of him accidentally inhaling the powder, a small amount of the drug absorbed intranasally can cause overdose. Faust also commented on the necessity of the large amount of naloxone administered. Due to naloxone’s efficacy in typical opioid overdose cases, he hypothesized that Green’s loss of consciousness was likely not opioid-related.<sup>15</sup>

Symptoms of fentanyl toxicity, like other opioids, vary depending on the dosage encountered, but classically involves the triad of miosis, central nervous system depression and respiratory depression. The primary insult that can lead to death is respiratory depression that may progress to apnea.

The potential risk to first-responders following exposure to fentanyl and fentanyl analogue powders remains unclear. As of this writing, there is limited published governmental advice for first responders contacting such powders. The National Institute for Occupational Safety and Health at the Centers for Disease Control and Prevention published a safety protocol for emergency responders and law enforcement officers handling potential powders containing fentanyl and its analogs. In this protocol, it is simply recommended that officers refrain from any field testing and that they wear masks, gloves, goggles, long sleeves, and long pants when assessing a case that might involve fentanyl.<sup>16</sup> At this time, that advice is appropriate and should be followed. First responders are encouraged to contact the Blue Ridge Poison Center if they have any questions or concerns about accidental exposure to suspected or known opioids: 1-800-222-1222. Cell users may use 1-800-451-1428.

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