

# Memory loss hitting some fentanyl abusers

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(HealthDay)—Using fentanyl or other opioids alongside other illicit drugs could trigger possibly permanent amnesia caused by brain damage, doctors warn.

Over a dozen cases have emerged in which drug abusers have developed severe short-term memory loss, possibly after experiencing an overdose, said Marc Haut. He's chair of West Virginia University's department of behavioral medicine and psychiatry.

"They all have difficulty learning new information, and it's pretty dense," Haut said. "Every day is pretty much a new day for them, and sometimes within a day they can't maintain information they've learned."

Imaging scans of patients revealed lesions on the hippocampus, a region of the brain associated with memory, Haut explained.

These amnesiac drug users do not recover quickly, and there's some question whether they will ever fully regain their short-term memory, Haut added.

"Based upon the imaging, I would be surprised if they didn't have at least some significant [memory problems](#) permanently," Haut said.

The latest case occurred in May 2017, when doctors at a West Virginia hospital treated a 30-year-old Maryland man suffering from persistent memory impairment.

Family members reported that the man had a history of heroin use, and had recently left a residential addiction treatment program.

The patient had been off drugs for a month when one evening he returned home late and couldn't be awakened the next morning. His family found him in his room with drug paraphernalia, asking repetitive questions as he became more alert.

Blood tests revealed the presence of cocaine in his system and urine tests detected norfentanyl, a chemical produced by the breakdown of fentanyl in the body, the researchers said.

Meanwhile, imaging scans showed lesions on the man's brain, along the hippocampus and basal ganglia.

Digging further, the investigators found another similar case of drug-related amnesia in Virginia in September 2015, as well as a total of 14 cases between 2012 and 2016 in Massachusetts.

None of these previous amnesiac patients were tested for fentanyl, but 15 of the total 16 known cases tested positive for opioid use, the researchers reported. Half also had a history or tests indicating cocaine use.

These observations are new, very unusual and quite troubling, said Dr. Tim Brennan, director of the Addiction Institute at Mount Sinai West and Mount Sinai St. Luke's Hospitals in New York City.

"I've not seen that with other opioids. I have patients who have abused heroin for years and they've never complained of that or shown any signs of that," Brennan said. "This is very unique. This is nothing I've seen before."

Haut noted that the researchers aren't sure what's causing the [brain damage](#) revealed by imaging scans.

It's possible that these patients experienced an undetected drug overdose that temporarily stopped their heart or lungs, cutting the flow of oxygen to their brain, he suggested.

"You get that cutoff of oxygen and that can produce lesions like this, but not to this extent typically," Haut said. "We think the fentanyl is adding to that effect and exacerbating that effect," possibly when taken in combination with a stimulant like cocaine.

For example, Haut suspects the Maryland man overdosed, but no one saw his heart or breathing stop. Overdose was noted in other patients, but doctors need to discover more cases to compare and figure out what's really going on, he said.

Overdose risk is extremely high with fentanyl, which is 50 to 100 times more potent than morphine. That makes the synthetic opioid much more powerful than either heroin or other prescription painkillers, according to the U.S. National Institute on Drug Abuse.

Because fentanyl is so potent and cheaper than heroin, Brennan said, many drug traffickers have taken to cutting heroin with the synthetic. Unsuspecting buyers wind up taking a drug cocktail that's much more powerful than they expect.

"As the [fentanyl](#) starts being combined with heroin, it's creating a huge increase in accidental overdoses," Brennan said. "Quality control of course is typically nonexistent in [illicit drugs](#)."

Haut and his colleagues reported on these cases in the Jan. 30 issue of the *Annals of Internal Medicine*. The authors hope the report will prompt

doctors to take a closer look at patients who come in for either amnesia or drug overdose.

"Is it happening more often than we realize?" Haut asked. "These are folks who sometimes don't even go to the hospital when they [overdose](#), much less have family who might take them there if they notice memory problems."

The sad part is these memory problems might doom [drug](#) users to a lifetime of addiction, since they can't learn from their mistakes, Haut said.

"We talk a lot about people who don't survive overdoses, but we aren't talking about people who survive repeated overdoses and the impact that might have on them and their functioning," Haut said. "If their memory is really compromised, it's going to be hard for them to learn a new life that doesn't involve drugs."

**More information:** Marc Haut, Ph.D., chair, department of behavioral medicine and psychiatry, West Virginia University, Morgantown, WV; Tim Brennan, M.D., director, Addiction Institute, Mount Sinai West and Mount Sinai St. Luke's Hospitals, New York City; Jan. 30, 2018, *Annals of Internal Medicine*, [Abstract/Full Text \(subscription or payment may be required\)](#)

For more on fentanyl abuse, visit the [U.S. National Institute on Drug Abuse](#).

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