

Will Those Who Made Fentanyl Now Get to Sell the Vaccine?

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✓ Fact Checked

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STORY AT-A-GLANCE

- › The University of Houston published the results of an animal study demonstrating a series of three shots could eliminate the risk of fentanyl overdose but did not affect the use of other opioids
- › The shot was created with the adjuvant dmLT, which has a history of use in human trials using oral administration; the animals were followed for six weeks. The researchers announced plans for Phase 1 human clinical trials in 2023
- › Fentanyl is 50 times stronger than heroin and 100 times stronger than morphine; it is used to cut other street drugs, and some believe it's used to cut some prescription drugs as it is cheap and easy to manufacture
- › According to the author of "Fentanyl, Inc.," the manufacture of the street version of the drug is subsidized by the Chinese government before being shipped to Mexico and trafficked to the U.S. through the southern border
- › Prescription opioids were subsidized by drug companies that gave prescribing doctors kickback money and, until just recently, the AMA taught doctors that opioids were only effective for pain control and not addictive

On November 14, 2022, the University of Houston announced positive results from a single animal study in which they tested a vaccine against fentanyl.¹ Fentanyl, a synthetic opioid, was developed in the 1950s to help cancer patients but today is often used to cut heroin as it creates the same high, but is cheaper to produce.²

The researchers wrote that over 150 people die each day from synthetic opioids such as fentanyl, which is 100 times stronger than morphine and 50 times stronger than heroin. Many individuals with opioid use dependency started when they were prescribed pain medication.

Back pain is one of the most common health complaints around the world, the No.1 cause of job disability³ and the most common reason for opioid dependence.⁴ Although opioids are commonly prescribed for people with chronic low back pain, research demonstrates they often fail to control moderate to severe pain any better than over-the-counter drugs like naproxen, ibuprofen and acetaminophen.⁵

Opioids have a high rate of addiction and have not been proven effective for long-term use. Data show drug overdose deaths in the U.S. totaled 53,356 in 2015. This number rose to 72,151 in 2019 and then skyrocketed to 107,622 just two years later. Fentanyl is also being used to cut the street drug ecstasy and in 2019 was starting to catch on as a drug of choice in some cities.⁶

Fentanyl Vaccine May Lower Drug Overdose Deaths

A 2022 study published in the journal *Pharmaceutics*⁷ and described as a possible 'game changer' in the opioid crisis.⁸ The researchers sought to develop a vaccine that would stop fentanyl from entering the brain and thus eliminate the "high" users experience from the drug and subsequent respiratory depression.

An overdose of fentanyl depresses the signals from the brain to the lungs, which deprives the brain of oxygen leading to severe brain injury and possible death.⁹ The study's lead author, Colin Haile, described the potential vaccine as a "significant impact on a very serious problem" since the user doesn't experience the euphoria associated with fentanyl and "can 'get back on the wagon' to sobriety."¹⁰

In this animal study,¹¹ the researchers used a conjugate vaccine that included a deactivated diphtheria toxin and an adjuvant derived from *E. coli* called dmLT. The researchers reported this adjuvant had been combined with other vaccines in other

human clinical trials. Yet, in each trial the researchers cited, dmLT was administered orally and therefore exposed to the digestive tract.

In this case, the vaccine is administered by injection, which means dmLT enters the muscles and bloodstream directly. The shot was given to 28 male and female mice,¹² after which the researchers measured antibodies. Serum testing showed antibody levels jumped significantly after the third round, between weeks four and six. The researchers tested whether fentanyl had reached the brain by gauging pain reactions since opioids are used to dull pain sensation.

The shot triggered the animal to create anti-fentanyl antibodies that bound with fentanyl, preventing it from entering the brain and allowing it to be eliminated through the kidneys. Scientists tested whether the vaccine would affect the use of other opioids like morphine.

U.S. Military and NIAID Are Funding and Supporting the Study

According to the data, the shot produced anti-fentanyl antibodies, but the mice tested continue to have an analgesic effect from other opioids such as heroin and morphine. The researchers believe this means people could be vaccinated against the effects of fentanyl but could still receive analgesic treatment with other opioid derivatives, and therefore could also get high from other opioid drugs.

The mice were tested over six weeks, during which the researchers did not see any adverse side effects from the injections. The long-term side effects were not tested and are not yet known. The research team plans to start Phase 1 human trials in 2023 after using an animal model that included only mice. The study was funded by the Office of the Assistant Secretary of Defense for Health Affairs and the National Institute of Allergy and Infectious Diseases (NIAID).¹³

The results of interviews with 64 individuals were published in May 2022,¹⁴ in which the researchers reported there were positive responses to the potential for a fentanyl vaccine. The Daily Mail described one use for the vaccine:¹⁵ “Dr. Haile used the example

of a parent forcing their child to get vaccinated before going off to college to protect them in case they 'experiment'."

The University of Houston has also submitted a provisional patent on the technology used to produce the vaccine on behalf of the four investigators involved in the development.¹⁶

Fentanyl Is a Dark Web Profit Center

The Daily Mail¹⁷ reported that there's a variety of illicit uses for fentanyl which is largely sourced from Mexico through China. Experts point out that the southern border crisis in the U.S. is the primary way these drugs are trafficked into the country.

A journalist from NPR spoke with Ben Westhoff, author of the book "Fentanyl, Inc.," which examined "the manufacture, sale and use of fentanyl and other synthetic drugs."¹⁸ While doing the research for his book, Westhoff traveled to China, where he visited factories that made synthetic opioids. These synthetic opioids can be sold over the "dark web" and are cut into heroin, cocaine and sometimes prescription drugs.

Westhoff describes contact with a fentanyl dealer who was an addicted opioid user. He believed that he was helping opioid addicts by supplying a more affordable drug. Yet, as Westhoff points out, even the slightest miscalculation can be fatal. He reported that companies are making synthetic opioids in China with the support of the government.

In his book, Westhoff contends that the Chinese government is not only not cracking down on the industry, but "they're actually encouraging this industry through a series of tax breaks, subsidies and other grants."

Paying Doctors to Prescribe Was Part of the Opioid Epidemic

The CDC¹⁹ reported on a page that has since been removed, that the most common drugs involved in prescription opioid overdose deaths in 2017 were methadone, oxycodone (such as OxyContin®) and hydrocodone (such as Vicodin®).²⁰

After multiple litigation settlements,²¹ evidence showed that opioid makers like Purdue Pharma, owned by the Sackler family,²² knew exactly what they were doing when they claimed opioids – which are chemically similar to heroin – had an exceptionally low addiction rate when taken by people with pain.

In 2017, the idea that opioids not only were being overprescribed, but that the opioid makers themselves were manipulating the marketing and prescribing of the drugs was just coming to light. By March 8, 2022, the Sackler family agreed to settle for between \$5.5 billion and \$6 billion – but still refused to admit any wrongdoing.²³

The AMA saw the issue as²⁴ "mainly due to illicit fentanyl, fentanyl analogs, methamphetamine and cocaine." However, the issue began with overprescribing and not illicit use. As CNN reported²⁵ in 2018, "The more opioids doctors prescribe, the more money they make."

According to an analysis by CNN and Harvard researchers, in 2014 and 2015, hundreds of doctors received more than \$25,000 from opioid manufacturers, and those who prescribed the most opioids received the largest payments.

Dr. Andrew Kolodny, senior scientist at the Institute for Behavioral Health, co-director of the Opioid Policy Research Collaborative and executive director of Physicians for Responsible Opioid Prescribing told CNN, "This is the first time we've seen this, and it's really important. It smells like doctors being bribed to sell narcotics, and that's very disturbing."²⁶

To assess the link between drug company payments and prescription habits, the team reviewed data from two federal government sources – one that tracks drug company payments to doctors and another that tracks prescriptions made to Medicare patients. Of the 811,000 doctors who wrote prescriptions for Medicare recipients during 2014 and 2015, nearly half wrote prescriptions for opioids and 54% received payments from the drug makers.

AMA Pain Management Training Pushes Opioids

As the AMA blamed the opioid crisis on illicit drugs, they released a pain management training program that included 12 modules about prescribing narcotics. In it they said doctors were too tentative to give patients these pills and "the effectiveness of opioid therapy may be undermined by misconceptions about their risks, particularly risks associated with abuse and addiction."²⁷ The reporter from Mother Jones wrote:

"Thousands of physicians took the course, which was first released in 2003 and updated periodically over the next decade. Recently, I asked Dr. Roneet Lev, chief medical officer to the Office of National Drug Control Policy from 2018 to 2020, to take a look at the modules. She concluded, "I would call this 'How to Create an Addict' education.""

In addition to pushing addictive medication and driving up health care costs, the AMA owns, operates and profits from Current Procedural Terminology, or CPT, codes. This is a set of five-digit codes used for billing medical procedures and services. The codes are used by Medicare and other insurers and provide an incentive for physicians and hospitals to perform more procedures.

The complexity of the system necessitates software and billing companies that specialize in CPT codes, each of which pays the AMA for a license to do so. The AMA even has a hand in determining how much each procedure is worth, known as the Resource-Based Relative Value Scale, giving them immense control over U.S. the healthcare system.

Help for Opioid Addiction and Back Pain

The AMA has since taken steps to change its message about opioids, including removing Big Pharma funding from its pain management courses. However, Mother Jones explained, "For now, there's little to suggest the AMA won't repeat its mistakes if another Purdue comes along."²⁸

As it stands, if the vaccine is approved by the FDA, like Purdue Pharma, it quite possibly will be the drug companies that make fentanyl, which largely contributed to the fentanyl

epidemic, that will benefit from the shot.

If you or a loved one is struggling with opioid addiction, the Substance Abuse Mental Health Service Administration²⁹ can be contacted 24 hours a day at 1-800-622-HELP. [Low-dose naltrexone \(LDN\)](#), used in microdoses, can also help combat opioid addiction and aid in recovery.

Using microdoses of 0.001 milligrams (1 microgram), long-term users of opioids who have developed a tolerance to the drug are able to, over time, lower their opioid dose and avoid withdrawal symptoms as the LDN makes the opioid more effective.

It is essential to take good care of your back to help prevent back pain, which is a common reason that people become addicted to opioid drugs and is the leading health complaint. You'll find explanations for several strategies to protect back health and improve back pain in [Top Tips to Ease Back Pain](#). These include:

Move more and stand correctly	Chiropractic care
Acupuncture	Massage
Breath work	Specific stretches
Addressing the emotional roots of pain	Exercise techniques, such as foundation training, egoscue and neurostructural integration technique

Sources and References

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