

Fentanyl Front And Center In The Lethal Injection Battle



By Josh Bloom — January 25, 2018



Lethal Injection. Image: The Telegraph
[1]

I have written before about the intersection of pharmacology and capital punishment, and how the state of Oklahoma massively screwed up an execution. (See: [Chemistry, Politics, And The Death Penalty](#) [2]). In the piece, I argued that no matter what your feelings are about capital punishment that it should be done "right." By "right" I mean using the correct drugs so that botched executions don't occur because when they do the results can be horrifying. (See: [Top 10 Horrifically Botched Lethal Injections](#) [3]. But not if you want to sleep at night.)

This issue is once again in the news. As reported by the [Associated Press](#) [4], Nevada is planning to use a new and untried lethal injection that is described as "less humane than putting down a pet," according to attorneys David Anthony and Lori Teicher. Anthony and Teicher are public defenders who are representing Scott Raymond Dozier, a twice-convicted murderer, who has said that he wants to go through with the execution but has nonetheless given permission for attorneys to challenge the new method - the first in the state that does not use barbiturates as the lethal drug.

Instead, the state is planning on using a three-drug combination consisting of Valium, fentanyl, and cisatracurium besylate, a paralytic agent that is used to stop breathing. (For more on paralytics, see [Fugu: Attack Of The Killer Blowfish](#) [5].) It is the last drug that is generating the controversy. Let's look this from a pharmacological angle. Is cisatracurium needed? Should it be used at all? There are a number of opinions, one of which is just plain wrong. Here's why.

Standard lethal injections have consisted of a three-part procedure: 1. A barbiturate (sodium thiopental) to induce unconsciousness **(1)**, 2. pancuronium bromide to paralyze the diaphragm and

stop breathing, and 3. potassium chloride to stop the heart. But drugmakers, mostly in Europe (which is firmly against the death penalty), have decided to stop supplying prisons with drugs that are intended for lethal injections. (See: [Drugs For Life And Death We Can't Get Either](#). [6])

This left prisons scrambling for alternative humane lethal injections, which led to a monumentally dumb move in Oklahoma. Officials tried a combination of drugs that was guaranteed to fail **(2)**.

Convicted murderer Clayton] Lockett, however, was not unconscious. He writhed, groaned and convulsed on the table in agony, acid and fire pumping through his body. An excruciating 43 minutes passed, Lockett would scream and twitch, fighting against the restraints as the [poison](#) [7] slowly took hold. Death would finally arrive via heart attack, possibly resulting from the overwhelming pain rather than the chemical cocktail itself.

Richard Avis, "Top 10 Horrifically Botched Lethal Injections" [3]."

What Nevada is proposing is far better than the Oklahoma disaster, but it still doesn't make a whole lot of sense because of cisatracurium.

Dr. John DiMuro, who served as Nevada's chief medical officer from 2016-7, is also the anesthesiologist who developed the new method. DiMuro maintains that the procedure would be humane, and he is probably right. But, according to Anthony and Teicher, "Nevada wants to be the first state in the nation to kill condemned inmates by suffocation via paralysis of the diaphragm muscles."

The argument that the execution could be carried out *without* the cisatracurium was raised by Dr. David Waisel, a Boston anesthesiologist, who is the expert witness for Dozier.

Also weighing in is Deborah Denno, a law professor at Fordham University in New York. Denno said the Nevada execution protocol "ignores the medical evidence showing that the paralytic is a problematic drug to use."

So far, everyone is correct.

But Denno cited a 2014 execution in which midazolam (Versed, similar to Valium) and hydromorphone (Dilaudid), a strong opiate, were used in a botched [execution that took two hours](#) [8] to kill convicted murderer Joseph Rudolph Wood.

He gulped like a fish on land. The movement was like a piston: The mouth opened, the chest rose, the stomach convulsed.

Michael Kiefer, a reporter from [Azcentral](#) [9], who witnessed the execution. July 23, 2014.

Regarding the Nevada case, Denno said, "the circumstances are even worse because the starter drugs they're using before the paralytic heighten the risk that the person is not unconscious."

Nonsense. Because of the difference between hydromorphone and fentanyl. Fentanyl is much stronger and it works much faster.

A [CDC report](#) ^[10] entitled "Characteristics of Fentanyl Overdose — Massachusetts, 2014–2016," which was released on April 13, 2017, addresses just this - how fast fentanyl can kill. The report features interviews with people who had either witnessed fentanyl overdoses (95%) or had overdosed themselves (42%). Seventy-five percent of the interview respondents said that the onset of overdose symptoms was between seconds and minutes. Although there is plenty of pharmacological evidence to support the fast action of fentanyl, one respondent really drives this point home:

- "A person overdosing on regular dope [heroin] leans back and drops and then suddenly stops talking in a middle of a conversation and you look over and realize that they're overdosing."
- "Not like with fentanyl. I would say you notice it [a fentanyl overdose] as soon as they are done [injecting the fentanyl]."
- "They don't even have time to pull the needle out [of their body] and they're on the ground."

In the middle of this maelstrom is Clark County District Court Judge Jennifer Togliatti, who ruled that ruled that prison officials could execute Dozier using the diazepam and fentanyl. Togliatti also cited concerns that if Dozier wasn't dead, then using the cisatracurium could result in him being aware of any pain or suffering and that this awareness could not be determined by witnesses since Dozier would be paralyzed **(3)**.

Judge Togliatti got it right.

Some final thoughts:

- No- there will be no two-hour deaths if people are executed using Valium and fentanyl.
- Death will come quickly and not be experienced if sufficient Valium is used.
- A paralytic agent, which was the source of some concern, is unnecessary since dead people don't need to be paralyzed.
- Depending on your point of view, justice may or may not be done, but at least the science is sound.

NOTES:

(1) Ironically, one reason the barbiturates were used for lethal injections is their overdose potential. They have been replaced as sleep aids by the (much safer) benzodiazepines.

(2) The drug which failed was Versed, which is similar to Valium. Both are benzodiazepines. Although benzodiazepines will sedate you and put you to sleep, you will wake up when there is sufficient pain or discomfort. It would be interesting to see if whoever came up with this bright idea ever finished high school.

(3) This is analogous to surgeries where insufficient anesthesia is administered. Patients can feel

the pain from the surgery but are unable to convey this information to the surgeon. Nightmare.

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- [2] <https://www.acsh.org/news/2017/06/12/chemistry-politics-and-death-penalty-11257>
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