

Flakka, other synthetic drugs, can cause serious health issues



Byron Dobson, Democrat senior writer 10:09 a.m. EDT August 19, 2016

Few studies conducted on flakka's impact on the brain



(Photo: Scott Utterback/The C-J)

A Florida State student's [fatal stabbing of a Martin County couple \(/story/news/2016/08/17/sheriff-double-slaying-most-gruesome-death-imaginable-doing-absolutely-nothing/88925908/\)](#) has prompted renewed scrutiny of the synthetic drug flakka.

Martin County Sheriff William Snyder told reporters that Austin Harrouff likely was high on the designer drug during the brutal attack earlier this week.

That was based on the visible symptoms: High body temperature, an aggressive state of agitation, and the “abnormal levels of strength” Harrouff exhibited before being handcuffed.

Lab reports have yet to be returned to confirm the use of flakka.

While the general consensus is that flakka is a dangerous drug that can cause animal-like aggressive behavior, local experts say not enough research has been done to determine with certainty, what it actually does to the brain.

“Flakka and its cousins are stimulant drugs, not unlike cocaine, amphetamines or Ecstasy,” said Gregg Stanwood, a neuropharmacologist and behavioral neuroscientist at FSU’s College of Medicine. “They have very similar effects to those drugs. But they’re easier to make, harder to regulate.”

Synthetic drugs such as flakka, and a similar designer drug known as bath salts, do “a variety of things” to the brain and the body, Stanwood said.



Gregg Stanwood of FSU's College of Medicine *(Photo: Special to the Democrat)*

For instance, they increase a chemical in the brain called dopamine.

“It’s a very pleasurable chemical that gets released when you are feeling good,” he said.

But adding a synthetic drug like flakka, can produce too much and have devastating effects, he said.

“They can also cause psychotic hallucinations and unpredictable violent outbursts,” he said of designer or lab-created drugs.

What exactly does it trigger in the brain?

“That’s one of the things we just don’t know yet,” Stanwood said of the violent tendencies associated with the drug’s use. “We’re really not sure what specific effects on the brain are producing unprovoked violent outbursts.”

Stanwood said designer drugs like flakka and bath salts and amphetamines, which they are created to look like, can produce “a syndrome that resembles a violent form of psychosis in some people.”

When the drug wears off, the person is amazed to learn what behavior they exhibited.

Flakka is usually smoked or snorted rather than eaten because digesting it would take too long. Using the drug can be fatal as a result of the increase in body temperature and increased heart rate, all of which can induce a heart attack.

“It probably happens more than we know of,” he said.

That’s why more research is needed, he said.

“We know it’s being bought and sold more year after year,” he said. “I don’t think there are any studies conducted to really look at the escalation from drug use to drug abuse. We don’t know enough about flakka and these bath salts.”

Stanwood said research is being conducted on designer drugs but understanding their impact on the brain will take time.

“We understand molecularly what these drugs do, but understanding what it does to the full circuitry of the human brain is still unknown,” he said.

Dr. Siddharth Sehgal, a neurologist at Tallahassee Memorial HealthCare, said it is known that designer drugs, or synthetic drugs, “affect the chemical balance of the brain.”



Dr. Siddharth Sehgal explains the dangers of synthetic drugs on the brain (Photo: David Barfield)

One challenge for law enforcement is that synthetic drugs don’t always show up in routine blood tests. Specific lab tests are needed to determine what drug has been ingested.

He explained that synthetic drugs and even cocaine, increase the levels of activities of the “excitatory” transmitters in the brain known as dopamine and serotonin.

“People with depression have low levels of these in the brain,” he said. “These (synthetic) drugs increase the levels too much. You feel like you can do anything you want. You become extremely hyperactive, you seem like you have superhuman powers. You feel like Hulk.”

The increase in body temperatures can lead to hallucinations, which can go on for a long time, he said.

“These synthetic drugs are unpredictable,” he said, as are their side effects. “These designer drugs can attach to the neurons of the brain but how long they stay attached is unpredictable, but longer than cocaine.”

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