



“SPEED-  
BALLING”:  
MIXING  
STIMULANTS  
AND OPIOIDS

MICROMODULE



**FLORIDA DEPARTMENT  
OF CHILDREN AND FAMILIES**  

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THE FLORIDA ALCOHOL AND DRUG ABUSE ASSOCIATION (FADAA)  
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# LEARNING OBJECTIVES

- List the various substances that can be combined to create a “speedball”.
- Describe the effects of “speedballing” on the user.
- Describe the health consequences of “speedballing”.

# WHAT IS SPEEDBALLING?

- Substances involved

## SPEEDBALL DEFINED

- Typically a “speedball” involves a combination of an opioid (a depressant) and a stimulant (e.g., cocaine, methamphetamine).<sup>1</sup> The concurrent use of depressant and stimulant combinations are typically injected but can be consumed intranasally and other ways.



## SPEEDBALL DEFINED

- In a speedball, the cocaine (or other stimulant) may be:
  - Injected in a mixture with heroin
  - ‘Piggy-backed’: injected immediately before or after the heroin (sometimes without removal of the syringe),<sup>2</sup> the drug being ‘back-loaded’ directly in the same syringe.<sup>3</sup>



# SPEEDBALL DEFINED

- Today the “speedball” term encompasses various combinations of stimulant and opioid substances.
- This polydrug combination is not the only form or method of polydrug consumption among speedball users.<sup>4</sup>

# SPEEDBALL COMBINATIONS

Common examples of **stimulants** that can be mixed with an opioid to create a speedball include:

- Cocaine
- Methamphetamine
- Prescription stimulant medications like those used to treat attention-deficit hyperactivity disorder (ADHD) such as:
  - Dexedrine<sup>®</sup>, Adderall<sup>®</sup>, Ritalin<sup>®</sup>, Concerta<sup>®</sup>
- Counterfeit versions of stimulant substances



# SPEEDBALL COMBINATIONS

Common **opioids** that can be mixed with a stimulant to create a speedball include:

- Heroin
- Opioid medications (prescribed or from the street including counterfeit versions) such as:
  - Hydrocodone (Vicodin<sup>®</sup>) oxycodone (OxyContin<sup>®</sup>, Percocet<sup>®</sup>)
  - Oxymorphone (Opana<sup>®</sup>)
  - Morphine (Kadian<sup>®</sup>, Avinza<sup>®</sup>)
  - Codeine
  - Fentanyl

# HEROIN/METH COMBINATION

- Heroin and methamphetamine are commonly misused together.
- Both of these drugs are incredibly addictive and dangerous when taken separately. Mixing heroin and meth together creates far greater danger.<sup>5</sup>

# FENTANYL/COCAINE COMBINATION

- Fentanyl is sometimes deliberately mixed with cocaine to create a speedball.
- More often, fentanyl/cocaine mixtures target users who are unaware they are consuming fentanyl; they are more likely to have an adverse reaction than those who intentionally sought out the opioid.<sup>6</sup>

# FENTANYL/COCAINE COMBINATION

- Fentanyl powder cannot be detected in powdered cocaine just by looking at it. 2016 saw a nearly 297 percent increase in fentanyl reports also containing cocaine (496 out of 34,204 total reports).<sup>7</sup>
- The cocaine and fentanyl mix is considered by some experts to be “speedballing on steroids.”<sup>8</sup>
- Fentanyl is also sometimes deliberately mixed with cocaine and heroin for a “super speedball”.<sup>9</sup>

Cities with  
Heroin  
Exhibits that  
Contained  
Fentanyl or  
Fentanyl-  
Related  
Substances<sup>10</sup>

# GENERAL EFFECTS OF SPEEDBALLING ON THE USER

# GENERAL EFFECTS

- Cocaine (and similar stimulants) and heroin (and similar opioids) exert different effects on the brain.
  - For example, consuming cocaine and heroin together creates a “push-pull” reaction in the body and brain.<sup>11</sup>
- By combining a stimulant and an opioid, users experience an intense rush, while hoping to reduce the negative effects of both drugs.

# GENERAL EFFECTS

## Example:

- Heroin tends to make users very drowsy to the point that they may have difficulty staying awake during the high. Taking cocaine fixes this with a burst of energy.
- On the other hand, cocaine use can cause a person to be agitated, anxious, and paranoid while adding heroin can instantly calm the person down.



## OPPOSITE EFFECTS

- Stimulants like meth have long-lasting effects. Opioids slow the activity of the central nervous system, including breathing.
- A heroin high for example doesn't last long, often only a few minutes. It's not uncommon for people to find combining opioids and stimulants appealing.<sup>12</sup>

# GENERAL EFFECTS

- Abusing these powerful drugs through their combination can affect one's health, social life, increase risky behaviors, and damage or end relationships.

# HEALTH EFFECTS AND CONSEQUENCES OF SPEEDBALLING ON THE USER

# HEALTH EFFECTS

- Both stimulants and opioids are common, addictive, and destructive.
- Once someone develops tolerance to a drug, they may be more likely to combine drugs in order to achieve the desired effects.
- While abusing two drugs at once will almost always guarantee some type of high, it also increases the risks of negative side effects.

# HEALTH EFFECTS

- Taking stimulants with opioids can cause negative side effects typically associated with the abuse of either one individually, such as a state of general confusion, incoherence, blurred vision, stupor, drowsiness, paranoia, and mental impairment because of lack of sleep.<sup>13</sup>
- The combination can also result in uncontrolled and uncoordinated motor skills, and also the risk of death from stroke, heart attack, aneurysm, or respiratory failure.

# HEALTH EFFECTS

- Negative effects of stimulants include anxiety, high blood pressure, and strong or irregular heartbeat, while the negative effects of opioids include drowsiness and suppression of breathing.

# HEALTH EFFECTS

- Meth and other stimulants mask the effects of the opioid.
- Since the effects of meth outlast heroin, a person's heart rate may also rapidly change pace. Their heart rate can go from very slow and depressed and then speed up very quickly.
- A rapid change in heart rate and respiration rate can cause arrhythmias, heart failure or stroke.<sup>14</sup>

# HEALTH EFFECTS

- Respiratory failure is particularly likely with speedballs because the effects of stimulants wear off far more quickly than the effects of opioids.
- For example, fatal slowing of the breathing can occur when the stimulating cocaine wears off and the full effects of the heroin are felt on their own.<sup>15</sup>



# HEALTH EFFECTS

- Despite the allure of an intense high, the dangers of mixing opioids and stimulants are significant.
- When meth and heroin are combined, it's difficult to determine when too much of either has been taken. This lack of awareness can increase the chances of a fatal overdose.<sup>16</sup>

# HEALTH EFFECTS

- Both meth and heroin are not only dangerous in the short-term but can cause severe cognitive, physical and psychological effects with long-term use.
- There is a mistaken belief held by some that if you mix heroin and meth you can avoid overdosing (that one counters the other). Not true!

# SPEEDBALL AND HUMAN IMMUNODEFICIENCY VIRUS (HIV)

- Sharing needles, syringes, or other injection equipment (works) to inject drugs puts people at risk for viral hepatitis, HIV and other infections. HIV can survive in a used needle for up to 42 days, depending on temperature and other factors. People who inject drugs can get other serious health problems, like skin infections or abscesses.<sup>17</sup>

## OTHER RISKS

Compared to users of cocaine, speedball users:

- Exhibit a more severe psychopathology
- Are more likely to fail in substance use treatment
- Are at increased risk of contracting HIV infection

The search for effective treatment medications for speedball users is complicated by the associated combination of pharmacologically dissimilar drugs.<sup>18</sup>

# SPEEDBALLING: PARENTAL EFFECTS & IMPACT ON CHILDREN

# PARENTAL EFFECTS/CHILD IMPACTS

- Parents using speedballs may become anxious. Anxious parents tend to display increased levels of uncertainty; criticize their children and themselves more often; and demonstrate more fear and show less warmth and affection toward family members. Parental anxiety is also a risk factor for childhood anxiety.<sup>19</sup>
- Parents under the influence of speedballs may experience paranoia. The associated fear and perceived threats a parent may perceive can contribute to their confrontational, aggressive, or violent behavior towards children.<sup>20</sup>
- In addition to dangers from fetal exposure to opioids and other drugs,<sup>21</sup> babies of parents who use speedballs are at risk of experiencing a roll-over injury or death if their parent's drowsiness contributes to co-sleeping.<sup>22</sup>

# PARENTAL EFFECTS/CHILD IMPACTS

- A child's caregiving environment may become altered by speedballing-related parental distraction creating potential safety risks for children.<sup>23</sup>
- Mental impairment and confusion from a parent's speedballing may contribute to less interactions with children and disruptions in healthy parent-child attachment, and developmental and cognitive delays in children.<sup>24</sup>
- A parent high from speedballing may experience uncontrolled and uncoordinated motor skills and may accidentally drop an infant or small child or cause other unintentional injuries.

# QUICK REFERENCE RESOURCE

Thank you for completing this micromodule. Please consider reviewing this module's quick reference resource (partial resource pictured right). It is available for download in the same location as this module.



FOR QUESTIONS, OR FOR ADDITIONAL INFORMATION

For additional opioid training modules:

- <http://www.training.fadaa.org/>

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20. [Shirley J. Semple, Steffanie A. Strathdee, Jim Zians, and Thomas L. Patterson. Methamphetamine-Using Parents: The Relationship Between Parental Role Strain and Depressive Symptoms. \*Journal of Studies on Alcohol and Drugs\* 2011 72:6, 954-964. <https://www.jsad.com/doi/abs/10.15288/jsad.2011.72.954>](#)
21. [Understanding Opioid Use, Pregnancy, and Neonatal Abstinence Syndrome \(NAS\). <https://www.training.fadaa.org/m4/>](#)
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