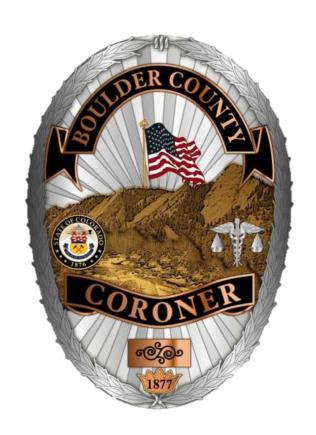
# Drugs Identified in Deceased Persons by the Office of the Boulder County Coroner



# 2025 Bi-Annual Drug Report

January 1, 2025 - June 30, 2025



# 2025 Bi-Annual Drug Report

This bi-annual drug report provides a comprehensive overview of drug-related findings observed in death investigations conducted during the first half of the year. The data presented highlights trends in substance use, identifies emerging drug threats, and informs public health and safety efforts.

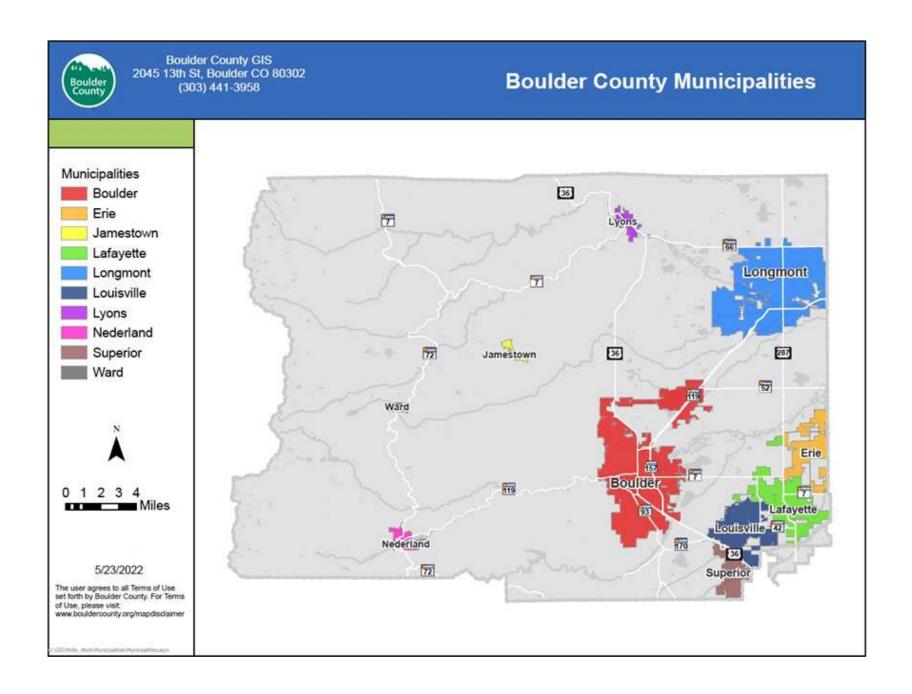
By analyzing toxicology results, manner of death classifications, and substance combinations, this report aims to support evidence based decision making and promote cross-agency collaboration in addressing substance related harms within our jurisdiction.

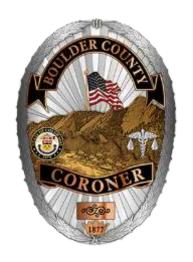
The State of Colorado Bureau of Vital Statistics reported 1,206 deaths in Boulder County from January 1, 2025, to June 30, 2025. Of the 1,206 deaths, the Office of the Boulder County Coroner (BCCO) certified 171 deaths. Of the 171 deaths, toxicology testing was performed on 92 individuals. Toxicology results determined that one or more of the drugs outlined below were present at the time of death in 73 decedents. The BCCO assessed whether the drug(s) identified were the cause of death or merely present at the time of death.

It is important to note that each death is a single case, while each time a drug is detected represents an occurrence. The vast majority of the 73 decedents who had positive toxicology testing had more than one drug occurrence.

33 deaths were the result of at least 1 drug.







A drug is indicated as the "cause of death" only when, after examining all evidence, the autopsy, and toxicology results, a forensic pathologist determines the drug played a causal role in the death. It is not uncommon for a decedent to have multiple drugs listed as a cause of death. However, a drug may not have played a causal role in the death even when the forensic pathologist determines the drug is present or identifiable in the decedent. Therefore, a decedent often is found to have multiple drugs listed as present; these are drug occurrences and are not equivalent to deaths.

# **Drugs Currently Monitored**

<u>ALCOHOL</u>	ANTI-DEPRESSANT	<u>BENZODIAZEPINE</u>	<u>INHALANT</u>	<u>OPIOID</u>	<u>OTHER</u>	<u>STIMULANT</u>
Ethanol	Aripiprazole	Alprazolam	Halogenated	Buprenorphine	Acetaminophen	Amphetamine
	Amitriptyline	Bromazolam	Helium	Codeine	Dextromethorphan	Cocaine
	Bupropion	Clonazepam	Nitrous Oxide	Fentanyl	Diphenhydramine	Methamphetamine
	Duloxetine	Diazepam		Heroin	Gabapentin	
	Fluoxetine	Midazolam		Hydrocodone	Ketamine	
	Mirtazapine	Nordiazepam		Hydromorphone	Mitragynine	
	Olanzapine	Oxazepam		Methadone	THC/Cannabinoids	
	Quetiapine	Temazepam		Morphine		
	Risperidone			Nitazines		
	Sertraline			Oxycodone		
	Trazadone			Oxymorphone		
	Venlafaxine			Tramadol		

<sup>\*</sup>The list of currently monitored drugs is regularly reviewed and updated to reflect emerging trends.

# **Summary of Drug Occurrences in Decedents**

Drugs Present in Body	Cause	Present	Total Occurrences			
	<u>ANTI-DEPRESSANTS</u>					
Aripiprazole	0	2	2			
Amitriptyline	1	5	6			
Bupropion	1	2	3			
Duloxetine	0	3	3			
Fluoxetine	0	5	5			
Mirtazapine	0	0	0			
Olanzapine	0	0	0			
Quetiapine	0	2	2			
Risperidone	0	1	1			
Sertraline	1	4	5			
Trazadone	2	0	2			
Venlafaxine	0	1	1			
	BENZODI	AZEPINES				
Alprazolam	Alprazolam 1 3 4					
Bromazolam	0	1	1			
Clonazepam	1	2	3			
Diazepam	0	4	4			
Midazolam	0	0	0			
Oxazepam	0	0	0			
Temazepam	0	1	1			
<u>ETHANOL</u>						
Alcohol	2	27	29			
<u>INHALANTS</u>						
Halogenated Inhalants	0	0	0			
Helium	0	0	0			
Nitrous Oxide	0	0	0			

# **Summary of Drug Occurrences in Decedents**

(continued)

Drugs Present in Body	Cause	Present	Total Occurrences
	OP	IOIDS	
Buprenorphine	0	2	2
Codeine	0	0	0
Fentanyl	24	2	26
Heroin	1	0	1
Hydrocodone	0	1	1
Methadone	1	2	3
Morphine	1	2	3
Nitazines	0	0	0
Oxycodone	0	4	4
Oxymorphone	0	3	3
Tramadol	0	1	1
	STIM	ULANTS	
Amphetamine	1	2	3
Cocaine	3	2	5
Methamphetamine	22	3	25
	0	THER	
Acetaminophen	0	0	0
Diphenhydramine	1	0	1
Dextromethorphan	0	0	0
Gabapentin	3	6	9
Ketamine	0	1	1
Mitragynine	0	0	0
THC/Cannabinoids	0	41	41



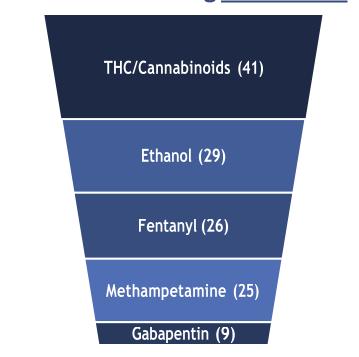
## **Drug Deaths**

**\$5.7%** 

33 decedents deaths were the result of at least 1 drug.

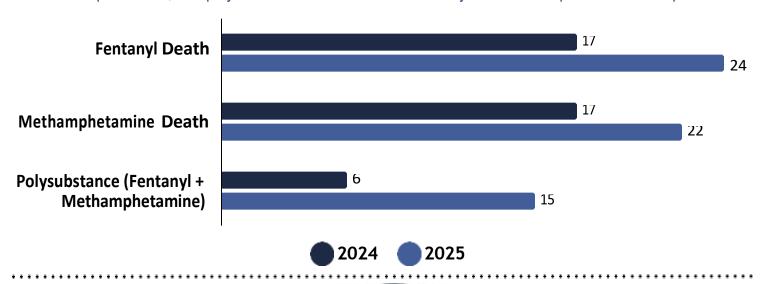
In the first half of 2024, there were 35 drug-related deaths, compared to 33 in the first half of 2025.

### **Most Common Drug Occurrences**



# **Fentanyl and Methamphetamine Deaths**

Although the overall drug deaths are down by 5.7%, we have observed an increase in deaths involving fentanyl, methamphetamine, and polysubstance use where both fentanyl and methamphetamine were present.



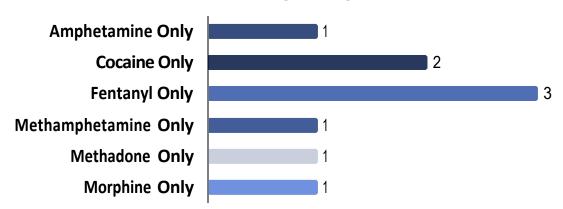




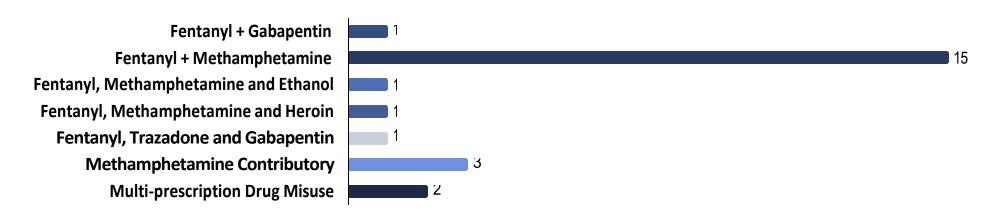
# **Cause of Death in All Drug Deaths**

Total of 33 Drug Deaths as of 06/30/2025

### **Single Drug Cause of Death**

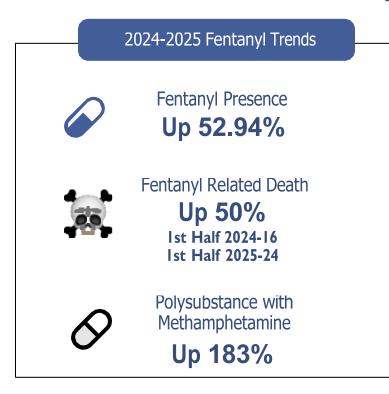


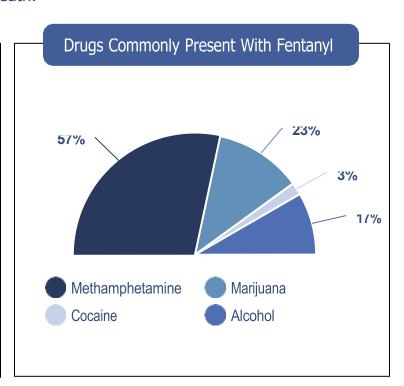
### **Polysubstance Cause of Death**

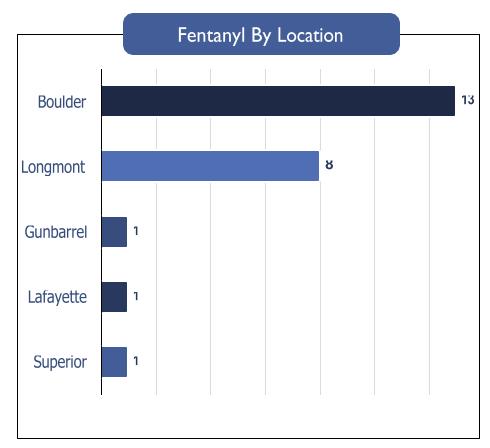


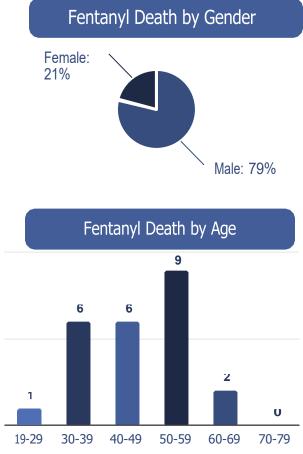
# **FENTANYL**

Fentanyl was found in 26 toxicology tests performed on behalf of the BCCO. In 24 of the occurrences Fentanyl was identified to be the cause of death; in 2 incidents Fentanyl was merely present at the time of death.



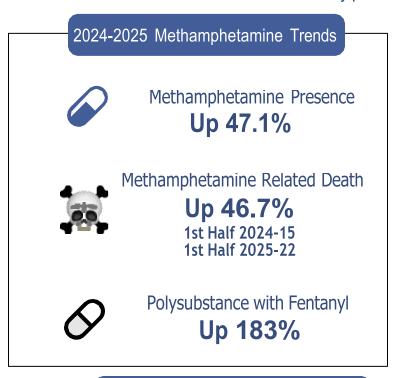


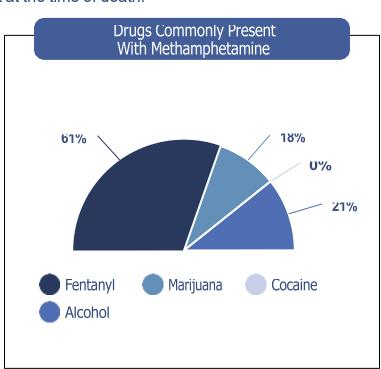


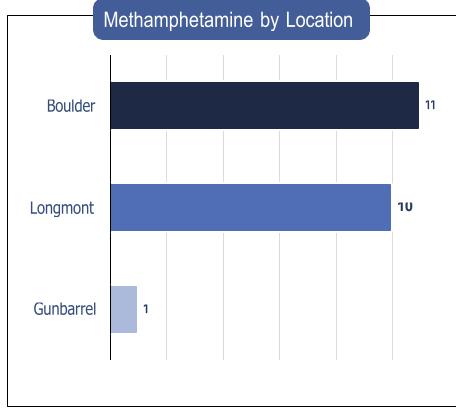


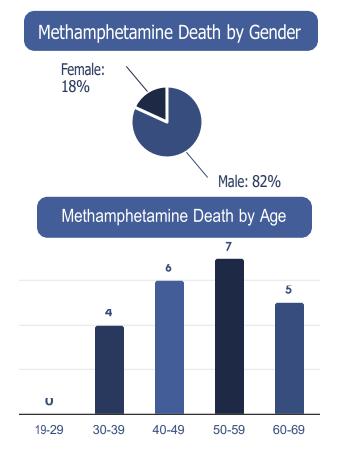
# **METHAMPHETAMINE**

Methamphetamine was found in 25 toxicology tests performed on behalf of the BCCO. In 22 of the occurrences Methamphetamine was identified to be the cause of death; in 3 incidents Methamphetamine was merely present at the time of death.









# 2024 vs 2025 Bi-Annual Comparison of Fentanyl and Methamphetamine Data

January - June 2024	Occurrence	Cause	Present
Methamphetamine	17	15	2
Fentanyl	17	16	1
Methamphetamine + Fentanyl	6	6	0

January - June 2025	Occurrence	Cause	Present
Methamphetamine	25	22	3
Fentanyl	26	24	2
Methamphetamine + Fentanyl	17	17	0

# Drugs Identified as Cause of Death

17 of the currently monitored drugs were identified as playing a causal role in death.

4 additional drugs were identified as playing a causal role in death during the first half of the year:

4

Ethylene Glycol - a toxic alcohol Hydroxyzine - antihistamine Topiramate - anticonvulsant Zopiclone - sedative

\*\*A drug is currently added to the monitoring list if it is determined to have played a causal role in three or more deaths within a single reporting year.

ALCOHOL	
ALPRAZOLAM	
AMITRIPTYLINE	
AMPHETAMINE	
BUPROPRION	
CLONAZEPAM	
COCAINE	
CODEINE	
DIPHENHYDRAMINE	
FENTANYL	
GABAPENTIN	
HEROIN	
METHADONE	
METHAMPHETAMINE	
MORPHINE	
SERTRALINE	
TRAZADONE	
	12



# **Drug Death Key Findings**

**Drug Deaths** 

91%

Accident

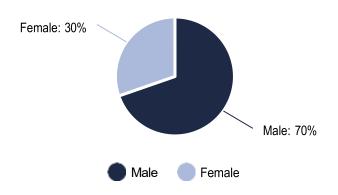
9% Suicide



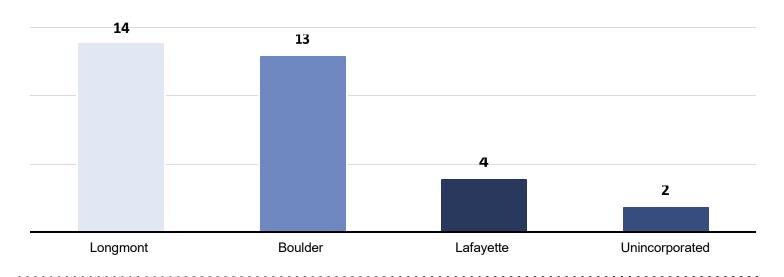
The average age of all drug deaths was:

46

The majority of drug deaths occurred between the ages of 30-59



# **Drug Occurrences by Location**





### **Glossary**

<u>Acetaminophen</u> – Acetaminophen is an over-the-counter analgesic with antipyretic properties; however, it has no anti-inflammatory actions. Proprietary names include Tylenol.

<u>Alprazolam</u> – Alprazolam is a low-dose benzodiazepine used for the treatment of anxiety disorders and short-term relief of anxiety associated with depressive symptoms.

<u>Amitriptyline</u> - A prescription medication primarily used to treat depression, but it is also commonly prescribed for other conditions like chronic pain, migraine prevention, and insomnia.

<u>Amphetamine</u> – A group of synthetic psychoactive drugs called central nervous system (CNS) stimulants. The collective group of amphetamines includes amphetamine, dextroamphetamine, and methamphetamine. Methamphetamine is also known as "meth," "crank," "speed," and "tina." Methamphetamine is metabolized to amphetamine, and thus, occurrences of amphetamine may represent methamphetamine ingestion rather than amphetamine ingestion.

<u>Aripiprazole</u> – Aripiprazole is a novel (atypical) antipsychotic drug that has complex and variable pharmacologic activity at both dopamine and serotonin receptors.

<u>Benzodiazepine</u> – A family of sedative-hypnotic drugs indicated for the treatment of stress, anxiety, seizures, and alcohol withdrawal. Benzodiazepines are often referred to as "minor tranquilizers." Xanax (alprazolam) and Valium (diazepam) are the most commonly prescribed drugs in this drug class. Many benzodiazepines are interconverted to one another, making occurrences of these drugs difficult to interpret. Exceptions include alprazolam, clonazepam, lorazepam, and midazolam.

<u>Bromazolam</u> – Bromazolam is a benzodiazepine that is used as a novel psychoactive substance. It is reported to have central nervous system (CNS) depressant properties and shares anticonvulsant, muscle relaxant, hypnotic, anxiolytic and sedative effects with other benzodiazepines. It is not marketed for use as a pharmaceutical product in any country.

<u>Bupropion</u> - A prescription medication primarily used to treat depression and to help people quit smoking. It is sold under brand names like Wellbutrin (for depression) and Zyban (for smoking cessation).

<u>Buprenorphine</u> - A semi-synthetic opioid known as Buprenex, Suboxone, and Subutex indicated for the treatment of opioid addiction and moderate to severe pain.

<u>Cannabinoids</u> - A series of compounds found in the marijuana plant, the most psychoactive of which is THC, a strong, illicit hallucinogen. Street names for this drug are often associated with a geographic area from which it came but also include generic names like "ganja," "MJ," "ragweed," "reefer," and "grass."

<u>Clonazepam</u> - Clonazepam is an intermediate to long-acting benzodiazepine hypnotic used in the treatment of insomnia and in the prevention and treatment of various seizure disorders.

<u>Cocaine</u> – An illicit stimulant. Powdered cocaine goes by many street names including "C," "blow," "snow," and "nose candy," while freebase cocaine is mostly commonly known as "crack."

<u>Codeine</u> - Codeine is a DEA Schedule III narcotic analgesic with central nervous system depressant activity. Hydrocodone is also a reported metabolite of codeine.

<u>Desmethylsertraline</u> – Desmethylsertraline is the principal metabolite of sertraline and has about 10 to 20% of the pharmacologic activity of the parent analyte.

<u>Duloxetine</u> – Duloxetine is an antidepressant drug that is described as a 'balanced' inhibitor of both norepinephrine and serotonin neuronal reuptake.

Diazepam – Diazepam is a benzodiazepine used primarily for its sedative anxiolytic or muscle relaxing effects.

<u>Delta-9 THC</u> – Delta-9 THC is the principle psychoactive ingredient of marijuana (cannabis, hashish).

<u>Delta-9 Carboxy THC</u> - Delta-9 THC is the principle psychoactive ingredient of marijuana/hashish. Delta-9 carboxy THC (THCC) is the inactive metabolite of THC.

<u>Dextromethorphan</u> – Dextromethorphan is the d-isomer of a synthetic codeine analog that has antitussive activity but is without a significant analgesic effect. The drug is frequently found as a constituent of cough and cold medications for adults and children that are available over the counter.

### **Glossary Continued**

<u>Diphenhydramine</u> - Diphenhydramine is an antihistamine with sedative and anti-emetic effects.

<u>Ethanol</u> – Ethyl alcohol is a central nervous system depressant and can cause effects such as impaired judgment, reduced alertness, and impaired muscular coordination. Ethanol can also be a product of decomposition or degradation of biological samples.

<u>Fentanyl</u> – Synthetic opioid analgesic supplied in transdermal patches and is also available for oral, nasal, intravenous, and spinal administration. Fentanyl is also produced illicitly and currently most Fentanyl occurrences represent the ingestion of illicit Fentanyl rather than pharmaceutically manufactured Fentanyl.

<u>Fluoxetine</u> - Fluoxetine is a chemically atypical antidepressant used to help control major depressive disorders.

<u>Gabapentin</u> - An anti-epileptic drug also called an anticonvulsant to treat neuropathic pain (nerve pain) caused by herpes virus.

<u>Halogenated Inhalants</u> – Includes, but is not limited to, halogenated hydrocarbons, especially refrigerants such as difluoroethane, which is a component of "compressed air" electronics cleaners; these and similar halogenated substances are typically used illicitly as inhalants.

<u>Helium</u> – Considered a Noble gas typically used illicitly as inhalants.

<u>Heroin</u> – An illicit narcotic derivative. It is a semi-synthetic product of opium. Heroin also has multiple street names including "H," "hombre," and "smack."

<u>Hydrocodone</u> – A narcotic analgesic (pain killer). Vicodin and Lortab are two common drugs containing hydrocodone.

<u>Hydromorphone</u> – A narcotic analgesic (pain killer) used to treat moderate to severe pain. Marketed under the trade name Dilaudid, it is two to eight times more potent than morphine. Commonly used by abusers as a substitute for heroin.

<u>Ketamine</u> – An animal tranquilizer and a chemical relative of PCP. Street names for this drug include "special K," "vitamin K," and "cat valium."

<u>Methadone</u> – A synthetic narcotic analgesic (pain killer) commonly associated with heroin detoxification and maintenance programs and is also prescribed to treat severe pain. It has been increasingly prescribed in place of oxycodone for pain management. Dolophine is one form of methadone.

**Methamphetamine** – Methamphetamine is a DEA schedule II stimulant drug capable of causing hallucinations, aggressive behavior, and irrational reactions.

<u>Midazolam</u> – Midazolam is a short acting benzodiazepine (a DEA Schedule IV controlled analyte) with sedative/hypnotic properties and is a strong central nervous system depressant. It is used for preoperative sedation, as a sedative hypnotic and as an agent for the induction of anesthesia.

Mirtazapine – Mirtazapine is used clinically as an antidepressant.

<u>Mitragynine</u> – An alkaloid found in the Kratom plant, which is consumed for its stimulant and analgesic (opioid-like) effects. The leaves of the Kratom plant, either whole or crushed, are smoked, chewed, or prepared as tea. In addition, plant extract containing Mitragynine is available in tablets and capsules.

Morphine – A narcotic analgesic (pain killer) used to treat moderate to severe pain. MS (Morphine Sulfate), Kadian, and MS-Contin are the tablet forms; Roxanol is the liquid form. Heroin is metabolized to morphine, and thus, occurrences of morphine may represent heroin ingestion rather than morphine ingestion.

**Nitazenes** – A group of illicit synthetic opioids (e.g., isotonitazene, protonitazine, etonitazene).

<u>Nitrous Oxide</u> (N2O) – Also known as "laughing gas," is an inhalant (gas) that produces light anesthesia and analgesia. "Whippets" are a common form of nitrous oxide.

<u>Nordiazepam</u> - Nordiazepam is a pharmacologically active metabolite of several benzodiazepines, including diazepam (Valium®) and chlordiazepoxide (Librium®).

### **Glossary Continued**

Olanzapine - Olanzapine is a drug used in the treatment of psychotic disorders (schizophrenia and bipolar mania).

<u>Oxazepam</u> - Oxazepam is a benzodiazepine. It is frequently seen as the metabolite of diazepam and other benzodiazepines; however, it is pharmacologically active and may be given as the primary medication for the short-term relief of symptoms of anxiety and in the management of alcohol withdrawal.

<u>Oxycodone</u> – A narcotic analgesic (pain killer). OxyContin is one form of this drug and goes by the street name "OC." Percocet, Percodan, Roxicet, Tylox, and Roxicodone also contain oxycodone.

Oxymorphone – A narcotic analgesic (pain killer) that is often prescribed as Opana, Numorphan, and Numorphone.

<u>Quetiapine</u> – Quetiapine is an antipsychotic analyte approved by the FDA for the management of the manifestations of psychotic disorders, including schizophrenia.

<u>Risperidone</u> - Risperidone is an atypically structured antipsychotic agent.

<u>Temazepam</u> - Temazepam is a benzodiazepine hypnotic agent used in the short-term relief of insomnia.

<u>Tramadol</u> – A synthetic narcotic analgesic sold under the trade name Ultram and Ultracet. Indications include the treatment of moderate to severe pain. It is a chemical analogue to codeine. Not currently a scheduled drug.

<u>Trazadone</u> – Trazodone is a structurally atypical antidepressant agent. It is prescribed for the treatment of major depression.

<u>Venlafaxine</u> - Venlafaxine is a non-tricyclic antidepressant agent.

### **Harm Reduction Resources**

Colorado offers free naloxone (Narcan) to reverse opioid overdoses, along with fentanyl test strips and other harm-reduction tools. You're also protected under Colorado's Good Samaritan Law (C.R.S. § 18-1-711) when calling for help during an overdose. Learn how to recognize the signs of an overdose, carry naloxone, and save a life.

### <u>Colorado Department of Public Health & Environment (CDPHE) – Overdose Prevention</u>

https://cdphe.colorado.gov/overdose-prevention

### <u>The Works Program – Boulder County Public Health</u>

Boulder County offers The Works Program, a free and anonymous harm reduction initiative delivering lifesaving services like naloxone, fentanyl test strips, safer-use supplies (for injecting, smoking, or snorting), and overdose response training. It also connects people to broader support, including treatment, housing, and recovery services—offering a holistic, stigma-free approach for those using substances and their communities.

https://bouldercounty.gov/families/disease/the-works-program/