

# Health Risks Related to the Use of Drugs and Alcohol

## Alcohol Health Risks<sup>1</sup>

### Short-Term Health Risks

Excessive alcohol use has immediate effects that increase the risk of many harmful health conditions. These are most often the result of binge drinking and include the following:

- Injuries, such as motor vehicle crashes, falls, drownings, and burns.
- Violence, including homicide, suicide, sexual assault, and intimate partner violence.
- Alcohol poisoning, a medical emergency that results from high blood alcohol levels.
- Risky sexual behaviors, including unprotected sex or sex with multiple partners. These behaviors can result in unintended pregnancy or sexually transmitted diseases, including HIV.
- Miscarriage and stillbirth or fetal alcohol spectrum disorders (FASDs) among pregnant women.

#### Long-Term Health Risks

Over time, excessive alcohol use can lead to the development of chronic diseases and other serious problems including:

- High blood pressure, heart disease, stroke, liver disease, and digestive problems.
- Cancer of the breast, mouth, throat, esophagus, voice box, liver, colon, and rectum.
- Weakening of the immune system, increasing the chances of getting sick.
- Learning and memory problems, including dementia and poor school performance.
- Mental health problems, including depression and anxiety.
- Social problems, including family problems, job-related problems, and unemployment.
- Alcohol use disorders, or alcohol dependence.

## **Substance Abuse Health Risks**

### I. Narcotics

Fentanyl:

- <u>Effects on the Body</u>: relaxation, euphoria, pain relief, sedation, confusion, drowsiness, dizziness, nausea, vomiting, urinary retention, pupillary constriction, and respiratory depression.
- Overdose Effects: stupor, changes in pupillary size, cold and clammy skin, cyanosis, coma, and respiratory failure leading to death.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>2</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 53)

#### Heroin:

- **Short-Term:** Euphoria; dry mouth; itching; nausea; vomiting; analgesia; slowed breathing and heart rate.<sup>3</sup> Drowsiness, respiratory depressions, constricted pupils, a warm flushing of the skin, and heavy extremities.<sup>4</sup>
- Long-Term: Collapsed veins; abscesses (swollen tissue with pus); infection of the lining and valves in the heart; constipation
  and stomach cramps; liver or kidney disease; miscarriage; low birth weight; neonatal abstinence syndrome; risk of HIV;
  hepatitis; and other infectious diseases from shared needles.<sup>5</sup>
- Combination with Alcohol: Dangerous slowdown of heart rate and breathing; coma; and death.<sup>6</sup>

### Hydromorphone:

- <u>Effect on the Mind</u>: euphoria; relaxation; sedation; reduced anxiety; mental clouding; changes in mood; nervousness; restlessness; physiological and psychological dependence.
- <u>Effect on the Body</u>: constipation; pupillary constriction; urinary retention; nausea; vomiting; respiratory depression; dizziness; impaired coordination; loss of appetite; rash; slow or rapid heartbeat; changes in blood pressure.
- Overdose Effects: severe respiratory depression; drowsiness progressing to stupor or coma; lack of skeletal muscle tone; cold and clammy skin; constricted pupils; reduction in blood pressure and heart rate; severe overdose can result in death.<sup>7</sup>

### Methadone:

- <u>Effects on the Mind</u>: psychological dependence.
- <u>Effects on the Body</u>: sweating; itchy skin; sleepiness; once stopped can experience anxiety, muscle tremors, nausea, diarrhea, vomiting and abdominal cramps.
- **Overdose Effects:** slow and shallow breathing; blue fingernails and lips; stomach spasms; clammy skin; weak pulse; coma; and possible death.<sup>8</sup>

### Morphine:

- Effects on the Mind: euphoria; relief of pain; tolerance; physical and psychological dependence.
- Effects on the Body: relief from physical pain; decrease in hunger; inhibition of the cough reflex.
- **Overdose Effects:** cold and clammy skin; lowered blood pressure; sleepiness; slowed breathing; slow pulse rate; coma; possible death.<sup>9</sup>

### Opium:

- Effects on the Mind: euphoric rush; relaxation; physical pain relief.
- <u>Effects on the Body</u>: inhibits muscle movement in the bowels; constipation; dry mouth; mucous membranes in the nose; physical and psychological dependence; overdose.
- **Overdose Effects:** slow breathing; seizures; dizziness; weakness; loss of consciousness; coma; possible death.<sup>10</sup>

## Oxycodone:

- <u>Effects on the Mind:</u> euphoria; relaxation.
- <u>Effects on the Body</u>: pain relief; sedation; respiratory depression; constipation; papillary constriction; cough suppression; severe liver damage with extended use<sup>11</sup>; drowsiness; nausea; constipation.
- Long-Term: miscarriage, low birth weight, neonatal abstinence syndrome; risk of HIV, hepatitis, and other infectious diseases from shared needles. <sup>12</sup>

<sup>&</sup>lt;sup>3</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>4</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 54)

<sup>&</sup>lt;sup>5</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>6</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>7</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 56)

<sup>&</sup>lt;sup>8</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 58)

<sup>&</sup>lt;sup>9</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 59)

<sup>&</sup>lt;sup>10</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 60)

<sup>&</sup>lt;sup>11</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 61)

<sup>&</sup>lt;sup>12</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

Overdose Effects: extreme drowsiness; muscle weakness; confusion; cold and clammy skin; pinpoint pupils; shallow breathing; slow heart rate; fainting; coma; and possible death.<sup>13</sup>

## **II. Stimulants**

### Amphetamines:

- <u>Effects on the Mind</u>: Prolonged stimulant effects; chronic use produces a psychosis that resembles schizophrenia and is characterized by paranoia, picking at the skin, preoccupation with one's own thoughts, and auditory and visual hallucinations; violent and erratic behavior.
- **Effects on the Body:** Increased blood pressure and pulse rates; insomnia; loss of appetite; physical exhaustion.
- <u>Overdose Effects</u>: Agitation; increased body temperature; hallucinations; convulsions; and possible death.<sup>14</sup>

### Cocaine:

- <u>Effects on the Mind</u>: Intense euphoric effect known as "rush"; increased alertness and excitation; restlessness; irritability; anxiety; possible paranoia; "crashing" after use, which is characterized by physical exhaustion, sleep and depression. Increased blood pressure and heart rate, dilated pupils; insomnia; and loss of appetite.<sup>15</sup>
- <u>Short-Term:</u> Narrowed blood vessels; enlarged pupils; increased body temperature, heart rate, and blood pressure; headache; abdominal pain and nausea; euphoria; increased energy, alertness; insomnia, restlessness; anxiety; erratic and violent behavior; panic attacks; paranoia; psychosis; heart rhythm problems; heart attack; stroke; seizure; and coma.<sup>16</sup> Irregular heartbeat, ischemic heart conditions, sudden cardiac arrest, convulsions, and death may also result.<sup>17</sup>
- Long-Term: Loss of sense of smell; nosebleeds; nasal damage and trouble swallowing from snorting; infection and death of bowel tissue from decreased blood flow; poor nutrition and weight loss; lung damage from smoking; premature delivery; low birth weight; deficits in self-regulation and attention in school-aged children prenatally exposed; risk of HIV; hepatitis; and other infectious diseases from shared needles.<sup>18</sup> In some users, the long-term use of inhaled cocaine has led to a unique respiratory syndrome, and chronic snorting of cocaine has led to the erosion of the upper nasal cavity.<sup>19</sup>
- **Combination with Alcohol:** Greater risk of cardiac toxicity than from either drug alone.<sup>20</sup>

#### Khat:

- <u>Effects on the Mind</u>: manic behavior; grandiose delusions; paranoia; nightmares; hallucinations; hyperactivity; can result in violence and suicidal depression<sup>21</sup>; euphoria, increased alertness and arousal.<sup>22</sup>
- <u>Effects on the Body</u>: immediate increase in blood pressure and heart rate; brown staining of teeth; insomnia; gastric disorders; chronic abuse can lead to physical exhaustion<sup>23</sup>; increased blood pressure and heart rate, headaches, loss of appetite, insomnia, fine tremors, loss of short-term memory.<sup>24</sup>

#### **Methamphetamine:**

• <u>Short-Term:</u> Increased wakefulness and physical activity; decreased appetite; increased breathing, heart rate, blood pressure, temperature; irregular heartbeat<sup>25</sup>; increased wakefulness, increased physical activity, decreased appetite, increased blood pressure, hyperthermia.<sup>26</sup>

<sup>&</sup>lt;sup>13</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 61)

<sup>&</sup>lt;sup>14</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 64)

<sup>&</sup>lt;sup>15</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 65-66)

<sup>&</sup>lt;sup>16</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>17</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 66)

<sup>&</sup>lt;sup>18</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>19</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 66)

<sup>&</sup>lt;sup>20</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>21</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 67)

<sup>&</sup>lt;sup>22</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>23</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 67)

<sup>&</sup>lt;sup>24</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>25</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>26</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 69)

- Long-Term: Anxiety, confusion, insomnia, mood problems, violent behavior, paranoia, hallucinations, delusions, weight
  loss, severe dental problems ("meth mouth"), intense itching leading to skin sores from scratching. In pregnancy,
  premature delivery; separation of the placenta from the uterus; low birth weight; lethargy; heart and brain problems. Risk
  of HIV, hepatitis, and other infectious diseases from shared needles.
- <u>Combination with Alcohol</u>: Masks the depressant effect of alcohol, increasing risk of alcohol overdose; may increase blood pressure.<sup>27</sup>

## **III. Depressants**

### **Barbiturates:**

- <u>Effects on the Mind</u>: Mild euphoria, lack of restraint, relief of anxiety, and sleepiness; impairment of memory, judgment, and coordination; irritability; and paranoid and suicidal ideation.
- Effects on the Body: Slowing of the central nervous system; sleepiness.
- <u>Overdose Effects:</u> Central nervous system depression, decreased respiration, increased heart rate, decreased blood pressure, decreased urine production, decreased body temperature, coma, and possible death.<sup>28</sup>

### **Benzodiazepines:**

- Effects on the Mind: Amnesia, hostility, irritability, and vivid or disturbing dreams.
- <u>Effects on the Body</u>: Slowing down of the central nervous system; sleepiness and relaxed mood.
- <u>Overdoes Effects:</u> Extreme drowsiness, confusion, impaired coordination, decreased reflexes, respiratory depression, coma, and possible death.<sup>29</sup>

### Gamma-hydroxybutyrate (GHB):

- <u>Effects on the Mind:</u> Euphoria, drowsiness, decreased anxiety, confusion, and memory impairment; visual hallucinations; excited and aggressive behavior.
- <u>Effects on the Body</u>: Nausea; unconsciousness, seizures, slowed heart rate, greatly slowed breathing, lower body temperature, vomiting, nausea, coma, and death; Insomnia, anxiety, tremors, increased heart rate and blood pressure, and occasional psychotic thoughts.
- **Overdoes Effects:** Coma and death.<sup>30</sup>

### **Rohypnol:**

- <u>Effects on the Mind</u>: Drowsiness; sleep; decreased anxiety and amnesia of events while under the influence of the substance; increased or decreased reaction time; impaired mental functioning and judgment; confusion; aggression; excitability.
- <u>Effects on the Body</u>: muscle relaxation; slurred speech; loss of motor coordination; weakness; headache; and respiratory depression.
- **Overdose Effects:** severe sedation; unconsciousness; slow heart rate; and suppression of respiration that may be sufficient to result in death.<sup>31</sup>

<sup>&</sup>lt;sup>27</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>28</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 72)

<sup>&</sup>lt;sup>29</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 73)

<sup>&</sup>lt;sup>30</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 75)

<sup>&</sup>lt;sup>31</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 77)

## **IV. Hallucinogens**

LSD (Acid):

- Short-Term: Rapid emotional swings; distortion of a person's ability to recognize reality, think rationally, or communicate
  with others; raised blood pressure, heart rate, and body temperature; dizziness; loss of appetite; tremors; enlarged pupils.
- Long-Term: Frightening flashbacks (called Hallucinogen Persisting Perception Disorder [HPPD]); ongoing visual disturbances, disorganized thinking, paranoia, and mood swings.<sup>32</sup>

### MDMA (Ecstasy/Molly):

- Short-Term: Lowered inhibition; enhanced sensory perception; increased heart rate and blood pressure; muscle tension; nausea; faintness; chills or sweating; sharp rise in body temperature leading to kidney failure or death.
- Long-Term: Long-lasting confusion, depression, problems with attention, memory, and sleep; increased anxiety, impulsiveness; less interest in sex.
- <u>Combination with Alcohol</u>: MDMA decreases some of alcohol's effects. Alcohol can increase plasma concentrations of MDMA, which may increase the risk of neurotoxic effects.<sup>33</sup>

## V. Miscellaneous

## Marijuana (Cannabis):

- <u>Short-Term:</u> Enhanced sensory perception and euphoria followed by drowsiness/relaxation; slowed reaction time; problems with balance and coordination; increased heart rate and appetite; problems with learning and memory; anxiety.
- Long-Term: Mental health problems, chronic cough, frequent respiratory infections. In pregnancy, babies born with problems with attention, memory, and problem solving.
- Combination with Alcohol: Increased heart rate, blood pressure; further slowing of mental processing and reaction time.<sup>34</sup>

### PCP:

- **<u>Short-Term</u>**: Delusions, hallucinations, paranoia, problems thinking, a sense of distance from one's environment, anxiety.
  - *In Low doses*: slight increase in breathing rate; increased blood pressure and heart rate; shallow breathing; face redness and sweating; numbness of the hands or feet; problems with movement.
  - In High doses: nausea; vomiting; flicking up and down of the eyes; drooling; loss of balance; dizziness; violence; seizures, coma, and death.
- Long-Term: Memory loss, problems with speech and thinking, loss of appetite, anxiety. PCP has been linked to self-injury. Risk of HIV, hepatitis, and other infectious diseases from shared needle.<sup>35</sup>

## Synthetic Cannabinoids - K2/Spice:

- <u>Effects on the Mind</u>: acute psychotic episodes; dependence; withdrawal; intense hallucinations; severe agitation; disorganized thoughts; paranoid delusions; violence.
- <u>Effects on the Body</u>: tachycardia; elevated blood pressure; unconsciousness; tremors; seizures; vomiting; hallucinations; agitation; anxiety; pallor; numbness; tingling.
- **Overdose Effects:** agitation; anxiety; seizures; stroke; coma; heart attack leading to death; organ failure leading to death; acute kidney injury.<sup>36</sup>

<sup>&</sup>lt;sup>32</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>33</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>34</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>35</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>36</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 101)

### Synthetic Cathinones ("Bath Salts"):

- <u>Short-Term:</u> Increased heart rate and blood pressure; euphoria; increased sociability and sex drive; paranoia, agitation, and hallucinations; violent behavior; sweating; nausea, vomiting; insomnia; irritability; dizziness; depression; panic attacks; reduced motor control; cloudy thinking.
- Long-Term: Death; Risk of HIV, hepatitis, and other infectious diseases from shared needles.<sup>37</sup>
- <u>Effects on the Body</u>: Rapid heartbeat; hypertension; hyperthermia; prolonged dilation of the pupil of the eye; breakdown of muscle fibers that leads to release of muscle fiber contents into bloodstream; teeth grinding; sweating; headaches; palpitations; seizures.<sup>38</sup>

### **Synthetic Opioids:**

- <u>Effects:</u> relaxation; euphoria; pain relief; sedation; confusion; drowsiness; dizziness; nausea; vomiting; urinary retention; pupillary constriction; respiratory depression.
- **Overdose Effects:** stupor; changes in pupillary size; cold and clammy skin; cyanosis; coma; respiratory failure resulting in death.<sup>39</sup>

### **Tobacco/Nicotine and Vaping:**

- **<u>Short-Term</u>**: Increased blood pressure, breathing, and heart rate.
- Long-Term: Greatly increased risk of cancer, especially lung cancer when smoked and oral cancers when chewed; chronic bronchitis; emphysema; heart disease; leukemia; cataracts; pneumonia. Use of tobacco in pregnancy can lead to miscarriage, low birth weight, stillbirth, learning and behavior problems. Use of nicotine in teenage years can affect development of brain circuits that control attention and learning. Some vaping products are mixed with Vitamin E acetate and other chemicals which can lead to serious lung illness and death.<sup>40</sup>

<sup>&</sup>lt;sup>37</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts

<sup>&</sup>lt;sup>38</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 99)

<sup>&</sup>lt;sup>39</sup> Drugs of Abuse | A Drug Enforcement Administration Resource Guide | 2022 Edition (page 103)

<sup>&</sup>lt;sup>40</sup> National Institute on Drug Abuse | Commonly Used Drugs Charts