ALAMO COLLEGES

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# Health Risks of Drug Abuse

## Medical Consequences of Drug Abuse

From the National Institute on Drug Abuse :

Drug addiction is a brain disease. Although initial drug use might be voluntary, drugs of abuse have been shown to alter gene expression and brain circuitry, which in turn affect human behavior. Once addiction develops, these brain changes interfere with an individual's ability to make voluntary decisions, leading to compulsive drug craving, seeking and use.

The impact of addiction can be far reaching. Cardiovascular disease, stroke, cancer, HIV/AIDS, hepatitis, and lung disease can all be affected by drug abuse. Some of these effects occur when drugs are used at high doses or after prolonged use; however, some may occur after just one use.

### HIV, Hepatitis and Other Infectious Diseases

Drug abuse not only weakens the immune system but is also linked to risky behaviors like needle sharing and unsafe sex. The combination greatly increases the likelihood of acquiring HIV-AIDS, hepatitis and many other infectious diseases.

**Drugs that can lead to HIV, Hepatitis and other infectious diseases:**

| |
|---|
| Heroin |
| Cocaine |
| Steroids |
| Methamphetamine |

### Cardiovascular Effects

Researchers have found a connection between the abuse of most drugs and adverse cardiovascular effects, ranging from abnormal heart rate to heart attacks. Injection drug use can also lead to cardiovascular problems such as collapsed veins and bacterial infections of the blood vessels and heart valves.

**Drugs that can affect the cardiovascular system:**

| | | |
|---|---|---|
| Cocaine | Heroin | Inhalants |
| Ketamine | LSD | Marijuana |
| MDMA | Methamphetamine | Nicotine |
| PCP | Prescription Stimulants | Steroids |

### Respiratory Effects

Drug abuse can lead to a variety of respiratory problems. Smoking cigarettes, for example, has been shown to cause bronchitis, emphysema and lung cancer. Marijuana smoke may also cause respiratory problems. The use of some drugs may also cause breathing to slow, block air from entering the lungs or exacerbate asthma symptoms.

**Drugs that can affect the respiratory system:**

| | |
|---|---|
| Cocaine | GHB |

| | |
|---|---|
| Heroin | Inhalants |
| Ketamine | Marijuana |
| Nicotine | PCP |
| Prescription Opiates | |

## Gastrointestinal Effects

Among other adverse effects, many drugs of abuse have been known to cause nausea and vomiting soon after use. Cocaine use can also cause abdominal pain.

**Drugs that can affect the gastrointestinal system:**

| | |
|---|---|
| Cocaine | GHB |
| Heroin | LSD |
| MDMA | Nicotine |
| Prescription Opiates | |

## Musculoskeletal Effects

Steroid use during childhood or adolescence, resulting in artificially high sex hormone levels, can signal the bones to stop growing earlier than they normally would have, leading to short stature. Other drugs may also cause severe muscle cramping and overall muscle weakness.

**Drugs that can affect the musculoskeletal system:**

| |
|---|
| Inhalants |
| MDMA |
| PCP |
| Steroids |

## Kidney Damage

Some drugs may cause kidney damage or failure, either directly or indirectly from dangerous increases in body temperature and muscle breakdown.

**Drugs that can cause kidney damage:**

| |
|---|
| Heroin |
| Inhalants |
| MDMA |
| PCP |

## Liver Damage

Chronic use of some drugs, such as heroin, inhalants and steroids, may lead to significant damage to the liver.

**Drugs that can cause liver damage:**

| |
|---|
| Heroin |
| Inhalants |
| Steroids |

## Hormonal Effects

Steroid abuse disrupts the normal production of hormones in the body, causing both reversible and irreversible changes. These changes include infertility and testicle shrinkage in men as well as masculinization in women.

**Drugs that can cause hormonal problems:**

| |
|---|
| Steroids |

## Neurological Effects

All drugs of abuse act in the brain to produce their euphoric effects; however some of them also have severe negative consequences in the brain such as seizures, stroke, and widespread brain damage that can impact all aspects of daily life. Drug use can also cause brain changes that lead to problems with memory, attention and decision-making.

**Drugs that can cause neurological problems:**

| | |
|---|---|
| Cocaine | GHB |
| Inhalants | Marijuana |
| MDMA | Methamphetamine |
| Nicotine | Prescription Stimulants |
| Rohypnol | |

## Mental Health Effects

Chronic use of some drugs of abuse can cause long-lasting changes in the brain, which may lead to paranoia, depression, aggression, and hallucinations.

**Drugs that can cause mental health problems:**

| | |
|---|---|
| Cocaine | Inhalants |
| Ketamine | Marijuana |
| MDMA | Methamphetamine |
| Prescription Stimulants | |

## Cancer

Cigarette smoking is the most preventable cause of cancer in the U.S. Smoking cigarettes has been linked to cancer of the mouth, neck, stomach, and lung, among others. Smoking marijuana also exposes the lungs to carcinogens and can cause precancerous changes to the lungs similar to cigarette smoke.

**Drugs that may cause cancer:**

| |
|---|
| Marijuana |
| Nicotine |
| Steroids |

## Prenatal Effects

The full extent of the effects of prenatal drug exposure on a child is not known, however studies show that various drugs of abuse may result in premature birth, miscarriage, low birth weight, and a variety of behavioral and cognitive problems.

**Drugs that may have adverse prenatal effects:**

| | |
|---|---|
| Cocaine | Heroin |
| Inhalants | Marijuana |
| MDMA | Methamphetamine |
| Nicotine | |

## Other Health Effects

In addition to the effects various drugs of abuse may have on specific organs of the body, many drugs produce global body changes such as dramatic changes in appetite and increases in body temperature, which may impact a variety of health conditions. Withdrawal from drug use also may lead to numerous adverse health effects, including restlessness, mood swings, fatigue, changes in appetite, muscle and bone pain, insomnia, cold flashes, diarrhea, and vomiting.

**Drugs that have global adverse health effects:**

| | | |
|---|---|---|
| Cocaine | Heroin | Inhalants |
| Marijuana | MDMA | Methamphetamine |
| Nicotine | Prescription CNS Depressants | Prescription Opiates |
| Prescription Stimulants | Steroids | |

## Mortality

Drug-related deaths have more than doubled since the early 1980s. There are more deaths, illness, and disabilities from substance abuse than from any other preventable health condition. Today, one in four deaths is attributable to alcohol, tobacco, and illicit drug use.

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## Special Acknowledgement

The following sections provide further information, research, and resources regarding district policy, state law, and alcohol and substance abuse. The format and research were developed and conducted by the Austin Community College District. Relevant district-specific information, web-links, and references to local resources have been modified accordingly to the Alamo College District and its service area. Special thanks to the Austin Community College District for sharing their guidance and knowledge.