The procedures, explanations and treatments provided in this publication are based on research and consultation with medical and nursing authorities. They all reflect accepted medical practices. Nevertheless they cannot be considered as absolute and universal recommendations. The authors, the editor and the publisher disclaim responsibility for any adverse effects resulting directly or indirectly from the suggested procedures, from any undetected errors, or from the reader’s misunderstanding of the text.
Drug Abuses

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs. It can also be simply defined as a pattern of harmful use of any substance for mood-altering purposes.

Generally, when most people talk about substance abuse, they are referring to the use of illegal drugs. But illegal drugs are not the only substances that can be abused. Alcohol, prescribed medications, inhalants and even coffee and cigarettes, can be used to harmful excess.

Substance abuse can lead to dependence syndrome - a cluster of behavioural, cognitive, and physiological phenomena that develop after repeated use including a strong desire to take the drug, persisting in its use despite harmful consequences, increased tolerance, and a physical withdrawal state.

In this guidebook, based upon the situation in our community, we present the most common substances that are often abused, how they are used, their street names, and their intoxicating and health effects.

Editorial

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• Alcohol is the most popular and most abused drug of dependence. It is derived from the fermentation of sugars or cereals. It comes under different names and brands, in different forms of beverages, part of medication and as an ingredient in food extracts. The level of alcohol content varies across the different brands. Its abuse is common because of its widespread availability.
• Alcohol consumption causes problems which vary in severity from mild to life threatening and affect the individual, the person’s family and society in numerous adverse ways. Alcohol is mainly used by the teenage, adult and mostly male population. It can be taken with other drugs like cocaine, heroin, etc. Alcohol abuse or dependence is called alcoholism.

**Characteristics and Global Facts**

Alcohol is mainly taken orally, i.e. by drinking it.

**Ways of Administration**

**Effects**

- happiness, giddiness
- talkativeness
- analgesia
- slurred speech
- flushed skin
- drowsiness, sleepiness
- nystagmus
- changed (often increased) response to sexual stimuli
- nausea, vomiting
- weight loss
- frequent urination (more with beer or wine), diuretic effect
- hangover, lasting 12-36 hours, from mild to severe after heavy use

**Presentative symptoms**

- altered consciousness
- memory impairment
- anxiety
- autonomic hyperactivity
- somnolence
- tachycardia
- nausea
- vomiting
- irritability
- tremors
- withdrawal
- hallucinations
- delirium
- seizures
- respiratory depression
- death
• **Type:** colourless, volatile liquid with a mild odor  
• **Family:** fermented organic compound with low molecular weight hydrocarbon  
• **Chemical name:** ethanol  
• **Common name:** booze, brew, cold one, juice, sauce, vino, hard stuff

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### Characteristics and Global Facts

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Alcohol is mainly taken orally, i.e. by drinking it.

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### Presentative symptoms

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### Effects

**Physical**  
- happiness, giddiness  
- talkativeness  
- analgesia  
- slurred speech  
- flushed skin  
- drowsiness, sleepiness  
- nystagmus
In chronic and heavy use, epilepsy, gastrointestinal problems such as pancreatitis, gastritis, cirrhosis, peptic ulcers, and gastrointestinal bleeding, malnutrition, liver damage (alcoholic cirrhosis), anemia and heart disease, sexual dysfunction, fetal damage in pregnant women at high dose or frequency (fetal alcohol syndrome), increased risk of cancer, Wernicke’s encephalopathy (abnormal brain functioning).

Psychological euphoria, confusion, mild visual distortions, hallucinations, decreased coordination, emotional volatility (anger, violence, sadness, etc), insomnia, dementia, depression, anxiety, irritability, blackouts and memory loss at high doses, stupor.

Duration of Effects

Alcohol is absorbed mainly in the stomach (gastric mucosa) and small intestine. Once absorbed, it is converted to acetaldehyde. Its metabolism occurs mainly in the liver.
In chronic and heavy use,
- epilepsy
- gastrointestinal problems such as pancreatitis, gastritis, cirrhosis, peptic ulcers, and gastrointestinal bleeding
- malnutrition
- liver damage (alcoholic cirrhosis)
- anemia and heart disease
- sexual dysfunction
- fetal damage in pregnant women at high dose or frequency (fetal alcohol syndrome)
- increased risk of cancer
- Wernicke’s encephalopathy (abnormal brain functioning)

**Psychological**
- euphoria
- confusion
- mild visual distortions
- hallucinations
- decreased coordination
- emotional volatility (anger, violence, sadness, etc)
- insomnia
- dementia
- depression, anxiety, irritability
- blackouts and memory loss at high doses
- stupor

**Duration of Effects**
1.5-3 hours

**Active molecules**
ethanol molecules

**Organs where the drug is concentrated**
Alcohol is absorbed mainly in the stomach (gastric mucosa) and small intestine. Once absorbed, it is converted to acetaldehyde. Its metabolism occurs mainly in the liver.
Withdrawal Symptoms

- Rapid pulse, increased blood pressure
- Rise in body temperature and sweating
- Tremors, seizures
- Loss of appetite
- Insomnia
- Nausea, and vomiting
- Hallucinations
- Agitation
- Anxiety
- Tingling and numbness
- Shaking in the morning
- Alcohol smell on breath and clothing
- Frequent intoxicated appearance or behavior, or bodily accident or injuries
- Failure to fulfill major obligations at work, school, or home (absence at work or school, loss of employment)
- Legal problems
- Continued use of alcohol despite having social, family, or interpersonal problems (divorce, financial difficulties, etc)
- Drinking more alcohol or drinking over a longer period of time than intended (loss of control)

Analgesics (e.g. aspirin, acetaminophen) - Alcohol enhances acetaminophen metabolism into a toxic product, potentially causing liver damage. Aspirin increases gastric emptying, leading to faster alcohol absorption in the small intestine.

Antibiotics (e.g. Isoniazid, erythromycin) - Alcohol increases the risk of isoniazid-related liver disease. Erythromycin may increase gastric emptying, leading to faster alcohol absorption in the small intestine.

Anticonvulsants - Chronic alcohol consumption induces phenytoin breakdown.

Antihistamines (e.g. Chlorpheniramine, Diphenhydramine) - Alcohol enhances the effects of these agents on the central nervous system (CNS), such as drowsiness, sedation, and decreased motor skills.

Anticoagulants (Warfarin) - Acute alcohol intake may increase anticoagulation by decreasing warfarin metabolism; chronic alcohol ingestion decreases anticoagulation by increasing warfarin metabolism.
Diagnosis and symptoms of use or Dependence

- tingling and numbness
- shaking in the morning
- alcohol smell on breath and clothing
- frequent intoxicated appearance or behavior, or bodily accident or injuries
- failure to fulfill major obligations at work, school, or home (absence at work or school, loss of employment)
- legal problems
- continued use of alcohol despite having social, family, or interpersonal problems (divorce, financial difficulties, etc)
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Withdrawal Symptoms

- rapid pulse, increased blood pressure
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- loss of appetite
- insomnia
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- hallucinations
- agitation
- anxiety

Interaction with other drugs or substances

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- Anticoagulants (Warfarin) - Acute alcohol intake may increase anticoagulation by decreasing warfarin metabolism; chronic alcohol ingestion decreases anticoagulation by increasing warfarin metabolism.
Antidiabetic agents (Chlorpropamide, Metformin) - Alcohol consumption by diabetic patients taking these medications increases the risk of hypoglycemia. Chlorpropamide, glyburide, and tolbutamide can cause disulfiram-like interactions after alcohol ingestion.

Barbiturates (Phenobarbital) - Alcohol enhances the sedative and hypnotic (induction of sleep) effects on the CNS.

Benzodiazepines (Diazepam, Lorazepam) - Alcohol enhances the effects of these agents on the CNS, such as drowsiness, sedation, and decreased motor skills.
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Amphetamine is a stimulant of the central nervous system and sympathetic division of the peripheral nervous system. The main action of amphetamines is to increase the activity of the neurotransmitter systems.

Methamphetamine is a psychostimulant and sympathomimetic drug. Methamphetamine enters the brain and triggers a release of norepinephrine, dopamine and serotonin. Dependence to methamphetamine typically occurs when a person begins to use the drug as a stimulant, due to its enhancing effects on pleasure and sex, alertness and ability to concentrate.

Yaba, also Ya Ba, Yaa baa, Ya baa or Yah Bah; (“crazy medicine” in Thai) are tablets containing a mixture of methamphetamine and caffeine, typically bright orange or green in colour and carrying logos such as “R” or “WY” . They are sometimes called Bhul Bhuliya in India.

MDMA (3,4-methylenedioxy-N-methylamphetamine), most commonly known today by the street name Ecstasy, is a semi-synthetic member of the amphetamine class of psychoactive drugs, a subclass of the phenethylamines.

Characteristics and Global Facts

The usual route for medical use is oral administration. In recreational use, it can be swallowed, snorted, smoked, and injected or inserted anally or into the urethra (with or without dissolution in water).

Effects

Physical

- reduced appetite
- increased/distorted sensations
- hyperactivity
- blurred vision, pupil dilatation
- anxiety, paranoia
- tachycardia
- hypertension
- tremors
- decreased appetite
- dizziness
- nausea
- vomiting
- constipation
- diarrhea
- decreased sweating
- dry mouth
- pupil dilatation
- hypertension
- tachycardia
- tremors
- anxiety
- increased heart rate
- decreased blood pressure
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• **Type:** white crystalline powder, capsule, tablet
• **Family:** phenylethylamines; plant of origin- Acacia berlandieri or Acacia rigidula
• **Chemical name:** alpha-methylphenethylamine
• **Common name:** Adderall, Vyvanse, Dexedrine, ice, crystal, glass, tina, speed, meth, chalk, amp, tweak

### Characteristics and Global Facts

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### Ways of Administration

The usual route for medical use is oral administration. In recreational use, it can be swallowed, snorted, smoked, and injected or inserted anally or into the urethra (with or without dissolution in water).

### Presentative symptoms

**Effects**
**Physical**
• reduced appetite

• increased/distorted sensations
• hyperactivity
• blurred vision, pupil dilatation
An amphetamine overdose can lead to a number of different symptoms including psychosis, chest pain, and hypertension.

## Symptoms

### Physical
- Restlessness
- Dry mouth
- Headache, dizziness
- Tachycardia, palpitations, arrhythmia
- Increased breathing rate and blood pressure
- Fever
- Sweating
- Diarrhoea or constipation
- Impaired speech
- Uncontrollable movements or shaking
- Insomnia
- Uncontrollable movements or shaking
- Emotional instability
- Excitability
- Talkativeness
- Increased expression of aggression or paranoia

### Psychological
- Anxiety and/or general nervousness
- Euphoria
- Creative or philosophical thinking
- Perception of increased energy
- Increased sense of well being
- Increase in goal-orientated thoughts or organized behavior
- Repetitive behavior
- Increased concentration/mental sharpness and alertness
- Feeling of power or superiority
- Emotional instability
- Talkativeness
- Increased expression of aggression or paranoia

### Active molecules

D-amphetamine (dextroamphetamine) and L-amphetamine

### Duration of Effects

5-30 minutes to 2-5 hours depending on the route of administration

### Organs where the drug is concentrated

CNS, the brain, especially some parts, have all been found to be primary sites of amphetamine action. Cardiovascular system, gastrointestinal, genitourinary, skin and ocular systems are also involved.
• flushing
• restlessness
• dry mouth
• headache, dizziness
• tachycardia, palpitations, arrhythmia
• increased breathing rate and blood pressure
• fever
• sweating
• diarrhoea or constipation
• impaired speech
• uncontrollable movements or shaking
• insomnia

**Psychological**
• anxiety and/or general nervousness
• euphoria

• creative or philosophical thinking
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**Organs where the drug is concentrated**

CNS, the brain, especially some parts, have all been found to be primary sites of amphetamine action. Cardiovascular system, gastrointestinal, genitourinary, skin and ocular systems are also involved.
Amphetamines have also been shown to pass through into breast milk. Because of this, mothers taking medications containing amphetamines are advised to avoid breastfeeding during their course of treatment.
Symptoms of Dependence

- decreased appetite and weight loss
- decreased fatigue
- euphoria
- hyperthermia, or increased body temperature
- increased breathing rate
- disregard for consequences of negative behaviors
- feelings of isolation
- hallucinations
- irritability and mood swings
- problems with the law/police
- paranoia
- recurrent failure to meet responsibilities at work, school, or home
- sleep disorders

Withdrawal symptoms

- anxiety
- agitation
- depression
- excessive sweating
- headache
- lethargy and fatigue
- muscle and stomach cramps
- tremors
- excessive sleeping
- psychosis
- suicidal thoughts

Diagnosis of amphetamine dependence begins with a medical history and physical examination. A urinalysis or blood tests will show if a person has used drugs.

Interaction with other drugs or substances

Amphetamines have also been shown to pass through into breast milk. Because of this, mothers taking medications containing amphetamines are advised to avoid breastfeeding during their course of treatment.

- Amphetamine together with high blood pressure medication - decreases the effectiveness of the blood pressure medication.
- Amphetamine together with tricyclic antidepressants - can change the way the brain reacts to amphetamine and dextroamphetamine, possibly causing more side effects.
- Amphetamine together with acetazolamide, antacids (such as calcium carbonate) can increase the amount of amphetamine in the blood, resulting in possible side effects.
The benzodiazepine family of depressants is used therapeutically to produce sedation, induce sleep, relieve anxiety and muscle spasms, and to prevent seizures. They possess varying hypnotic, sedative, anxiolytic (anti-anxiety), anticonvulsant, muscle relaxant and amnesic properties. In general, benzodiazepines act as hypnotics in high doses, anxiolytics in moderate doses, and sedatives in low doses. They can cause physical dependence and addiction, and upon cessation of long term use, a benzodiazepine withdrawal syndrome can occur.

Global Facts

Effects

Physical
- Drowsiness
- Dizziness
- Upset stomach
- Blurred vision
- Headache
- Changes in heart rate
- Chest pain

Muscular relaxation (anti-convulsant)
- Trembling and weakness
- Hangover effect
- Dreaming or nightmares
- Jaundice

Psychological
- Amnesia
- Euphoria

Most benzodiazepines are administered orally; however, administration can also occur intravenously, intramuscularly, sublingually or as a suppository.

Ways of administration

- Oral
- Intramuscular
- Sublingual
- Suppository

Pharmacological actions:
- Hypnotics
- Sedatives
- Anxiolytics
- Anticonvulsants
- Muscle relaxants
- Amnesics

Presentative symptoms

- Sleep disturbances
- Drowsiness
- Dizziness
- Fatigue
- Nausea
- Diarrhea
- Memory loss
- Impaired coordination
- Confusion
- Depression

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**BENZODIAZEPINES**

- **Type**: Tablet
- **Family**: Depressants (Psychoactive-antianxiety agent)
- **Chemical name**: 5-Phenyl-1, 4-benzodiazepine
- **Common name**: diazepam (Valium), alprazolam (Xanax), oxazepam (Serax), lorazepam (Ativan), clonazepam (Klonopin) and chlordiazepoxide (Librium)
Confusion
Relief from anxiety (anti-anxiety)
Depression
Impaired coordination
Paradoxical reactions: mania, schizophrenia, anger, impulsivity, and hypomania

Benzodiazepines are commonly divided into three groups by their half-lives: Short-acting compounds (e.g. alprazolam) have a half-life of less than 12 hours, intermediate-acting compounds (e.g. clonazepam) have a half-life of 12–24 hours, and long-acting compounds (e.g. flurazepam) have a half-life greater than 24 hours.

Organic compounds where the drug is concentrated:
Central Nervous System, heart, liver, kidney, colon, blood cells, lymphatics cells and adrenal cortex.

Benzodiazepines work by affecting the way certain brain chemicals (gamma-aminobutyric acid - GABA neurotransmitters) transmit messages to certain brain cells. In effect, they decrease the 'excitability' of many brain cells and produce a calming effect on various functions of the brain.

Diagnosis and symptoms of use or Dependence:

Unable to sleep
Headache
Tremor
Slurred speech
Sweating

Slowed breathing and decreased blood pressure
Palpitations
Feeling sick
Muscle spasms

Diagnosis and symptoms of use or Dependence:

• Insomnia
• Drowsiness
• Antagonism
• Rapid withdrawal
• Nonspecific signs

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Central Nervous System, heart, liver, kidney, colon, blood cells, lymphatics cells and adrenal cortex.

• Slowed breathing and decreased blood pressure
• Palpitations
• Feeling sick
• Muscle spasms
Individual benzodiazepines may have their own additional interactions with different variations. The interactions of benzodiazepines as a drug class with other drugs are as follows;

- Alcohol and other CNS depressants - cause additional adverse effects.
- Antacids and anticholinergics - may slow down absorption which may slow down acute therapeutic effects.
- Oral contraceptives, isoniazid - reduces the rate of elimination and thus the half-life increases leading to possibly excessive drug accumulation.
- Cimetidine - Inhibition of metabolism of benzodiazepines, causing accumulation which especially with long half life benzodiazepines such as diazepam may cause toxic effects.
- Rifampicin - increases rate of metabolism, thus shortening the elimination half-life of benzodiazepines.
- Digoxin - protein binding of diazepam altered causing increased digoxin levels.
- L-dopa - worsening of parkinsonian symptoms.
- Disulfiram - slows down the rate of metabolism leading to increased effects of benzodiazepines.

### Interaction with other drugs or substances

- Being oversensitive to light, sound and touch
- Psychological
  - Anxiety
  - Panic attacks
- Odd sensations
  - Feeling as if you are outside your body
  - Feelings of unreality
  - Lack of coordination
  - Memory impairment

### Adverse Effects

- Tachycardia
- Hypersalivation, sweating
- Constipation, diarrhea
- Weight gain or loss
- Liver damage
- Glaucoma
- Impaired fertility
- Menstrual disorders
- Alterations in libido
- Adverse effects are dose dependent

### Other Information

- Veterinary use
- Controlled substance
- Pregnancy
- Nursing mother
- Drug interactions
- Duration of therapy
- Patient monitoring
- Drug discontinuation
- Administration of emergency dialysis
- Drug testing

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**Benzodiazepines**

- Diazepam
- Etorphine
- Flunitrazepam
- Midazolam
Individual benzodiazepines may have their own additional interactions with different variations. The interactions of benzodiazepines as a drug class with other drugs are as follows:

- Alcohol and other CNS depressants - cause additional adverse effects.
- Antacids and anticholinergics - may slow down absorption which may slow down acute therapeutic effects.
- Oral contraceptives, isoniazid - reduces the rate of elimination and thus the half-life increases leading to possibly excessive drug accumulation.
- Cimetidine - Inhibition of metabolism of benzodiazepines, causing accumulation which especially with long half life benzodiazepines such as diazepam may cause toxic effects.
- Rifampicin - increases rate of metabolism, thus shortening the elimination half-life of benzodiazepines
- Digoxin - protein binding of diazepam altered causing increased digoxin levels
- L-dopa - worsening of parkinsonian symptoms
- Disulfiram - slows down the rate of metabolism leading to increased effects of benzodiazepines

### Psychological

- Anxiety
- Panic attacks
- Odd sensations
- Feeling as if you are outside your body
- Feelings of unreality
- Lack of coordination
- Memory impairment

### Interaction with other drugs or substances

Being oversensitive to light, sound and touch

- Odd sensations
- Feeling as if you are outside your body
- Feelings of unreality
- Lack of coordination
- Memory impairment

**Benzodiazepine tablets**

Extra Dermal Treatment Systems

**DIAZEPAM GEL**

Including 2% Diazepam HCI in 30 Gel

Produced By Mallirrheara Laboratories

DIAZEPAM GEL
Betel nuts are hard brown seeds. Whole seeds are about the size of a walnut.

Leaves from the betel vine are glossy green heart-shaped leaves. Kwan-ya is prepared by taking a chewing mixture of spices (clove, cardamom, etc. for extra flavouring) adding a few slices of betel nut (areca nut) combined with lime then wrapping them all in a folded betel leaf. There are many regional variations.

Kwan-ya is chewed as a palate cleanser and a breath freshener. It is also commonly offered to guests and visitors as a sign of hospitality and as an “ice breaker” to start conversation. It also has a symbolic value at ceremonies and cultural events in South and Southeast Asia including India.

The areca nut contains - tannin, gallic acid, a fixed oil gum, a little terpineol, lignin, various saline substances and three main alkaloids: Arecoline, Arecain and Guracine with vasoconstricting properties. The betel leaf chewed along with it contains - eugenol, also a vasoconstrictor. Many chewers also add small pieces of tobacco leaf to the mixture, thereby adding the effect of the nicotine, which causes greater dependence.
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• Dental caries,
  • periodontal disease, gingivitis,
  • toothache,
  • cavities,
  • unsightly staining to lips and teeth,
  • mouth ulcers, oral submucous fibrosis, pre-cancerous oral lesions

Withdrawal Symptoms
  • depression,
  • feeling tired,
  • restlessness,
  • mood swings

Psychological
  • sense of well-being,
  • increased alertness,
  • excitability,
  • euphoric feelings

Duration of Effects

5-30 minutes

Organs where the drug is concentrated

• central nervous system,
  • digestive system, especially oral and upper digestive tract.

Diagnosis of betel nut addiction can be easily detected by physical, psychological and withdrawal symptoms.
• perspiration
• hot sensation
• asthma exacerbation,
• hypertension
• tachycardia
• increased salivation
• damage to teeth, gum and cavities
• unsightly staining to lips and teeth
• mouth ulcers, oral submucous fibrosis, pre-cancerous oral lesions
• cancer of the mouth, pharynx, oesophagus and stomach

**Psychological**
• sense of well-being
• increased alertness
• excitability
• euphoric feelings

**Withdrawal Symptoms**
• depression
• feeling tired
• restlessness
• mood swings

---

**Duration of Effects**

5-30 minutes

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**Active molecules**

parasympathetic stimulant alkaloid arecoline

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**Organs where the drug is concentrated**

central nervous system, digestive system especially oral and upper digestive tract.

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**Diagnosis and symptoms of use or Dependence**

Diagnosis of betel nut addiction can be easily detected by physical, psychological and withdrawal symptoms
The effects of anticholinergic drugs (e.g. dicyclomine) may be decreased when used in combination with betel nut or its constituent arecoline. Combination use with cholinergic drugs may cause toxicity (salivation, increased tearing, incontinence, sweating, diarrhoea, vomiting, or fever). Betel nut may slow or raise the heart rate and could alter the effects of drugs that slow the heart, such as beta-blockers, calcium channel blockers, or digoxin. Betel nut may alter blood sugar levels. Patients taking drugs for diabetes by mouth or using insulin should be monitored closely by a healthcare provider and medication should be adjusted. Betel nut may increase the effects of angiotensin-converting enzyme (ACE) inhibitors, phenothiazines, cholesterol-lowering drugs, stimulant drugs and thyroid drugs. Other medications that betel nut may interact with include: antibiotics, medications that alter blood pressure, anti-inflammatory medications and medications taken for cancer or immunosuppression. Patients taking anti-psychotic drugs should be cautious due to increased side effects. Furthermore, chronic use of betel nut and alcohol may increase the risk of oral cancer.

Interaction with other drugs or substances

Betel nut slices
The effects of anticholinergic drugs (e.g. dicyclomine) may be decreased when used in combination with betel nut or its constituent arecoline.

Combination use with cholinergic drugs may cause toxicity (salivation, increased tearing, incontinence, sweating, diarrhoea, vomiting, or fever). Betel nut may slow or raise the heart rate and could alter the effects of drugs that slow the heart, such as beta-blockers, calcium channel blockers, or digoxin.

Betel nut may alter blood sugar levels. Patients taking drugs for diabetes by mouth or using insulin should be monitored closely by a healthcare provider and medication should be adjusted.

Betel nut may increase the effects of angiotensin-converting enzyme (ACE) inhibitors, phenothiazines, cholesterol-lowering drugs, stimulant drugs and thyroid drugs.

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Humans have been consuming cannabis since prehistory, although in the 20th century there was a rise in its use for recreational, religious or spiritual, and medicinal purposes. Cannabis is indigenous to central Asia and surrounding regions. The cultivation and possession of Cannabis for recreational use is illegal in most countries. However, it is estimated that about four percent of the world's adult population (162 million) use cannabis annually and 0.6 percent (22.5 million) daily. Cannabis, containing both THC (tetrahydrocannabinol) and CBD (Cannabidiol), exhibits a mix of stimulant, depressant and hallucinogenic properties, leaning towards hallucinogenic properties due to THC being the primary constituent.

### Characteristics and Global Facts

Cannabis is consumed in many different ways including smoking, vaporization using a vaporizer, ingestion and sub-lingual spray (for medical use in Canada). Major methods of consumption are inhaling smoke from the ignited plant or administering orally. Various devices exist for smoking cannabis. The most commonly used devices include screened bowls, bongs, chillums, paper-wrapped joints and cigar-leaf-wrapped blunts.

### Effects

**Physical**
- Reddening of eyes and sleepiness
- Increased intraocular pressure
- Dryness of mouth
- High blood pressure, heart rate
- Relaxation of muscle
- Increased sensation to heat or cold
- Craving for sweets
- Lethargy

**Relaxation of muscle**
- Increased sensation to heat or cold
- Craving for sweets
- Lethargy

### Ways of Administration

- Smoking
- Vaporization using a vaporizer
- Ingestion
- Sub-lingual spray (for medical use in Canada)

### Presentative symptoms

- Presentative symptoms
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**Effects**

**Physical**
- Reddening of eyes and sleepiness
- Increased intraocular pressure
- Dryness of mouth
- High blood pressure, heart rate

**Presentative symptoms**

- Relaxation of muscle
- Increased sensation to heat or cold
- Craving for sweets
- Lethargy
Psychological:
- Altered state of consciousness
- Hallucination, delusion and suspicious thoughts
- Mild euphoria
- Paranoia
- Increased appreciation of humor, music or art; joviality
- Increased libido (short term)

Long term effects:
- Increased risk of cancer
- Decrease in testosterone levels and lower sperm count for men
- Increase in testosterone levels for women and increased risk of infertility
- Diminished or extinguished sexual pleasure

Herbal cannabis contains over 400 compounds but Tetrahydrocannabinol (THC) is the main active compound in cannabis. Once inhaled, it rapidly enters the bloodstream through the lungs and the effects are perceptible within seconds and fully apparent in a few minutes. THC accumulates in fatty tissues and is slowly released back into other body compartments, therefore reaching peak concentration in 4-5 days. The tissue elimination or half life of THC is about 7 days and complete elimination of a single dose may take up to 30 days.

Diagnosis and symptoms of use or Dependence:
- A heightened sense of visual, auditory and taste perception
- Poor memory
- Increased blood pressure and heart rate
- Red eyes
- Decreased coordination
- Difficulty concentrating
- Increased appetite
- Slowed reaction time
- Paranoid thinking

Duration of the effects:
- A heightened sense of visual, auditory and taste perception
- Poor memory
- Increased blood pressure and heart rate
- Red eyes
- Decreased coordination
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Psychological

- Altered state of consciousness
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Long term effects

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Active molecules

Herbal cannabis contains over 400 compounds but Tetrahydrocannabinol (THC) is the main active compound in cannabis.

Organs where the drug is concentrated

Mainly in fatty tissue and the brain

Diagnosis and symptoms of use or Dependence

- A heightened sense of visual, auditory and taste perception
- Poor memory
- Increased blood pressure and heart rate
- Red eyes
- Decreased coordination
- Difficulty concentrating
- Increased appetite
- Slowed reaction time
- Paranoid thinking
Withdrawal Symptoms

- Headache
- Loss of appetite
- Inability to sleep

- Anxiety
- Physical tension
- Irritablity or aggression

Amphetamines, cocaine, other sympathomimetic agents - Additive hypertension, tachycardia, possible cardio toxicity

Atropine, scopolamine, antihistamines, other anticholinergic agents - Additive or super-additive tachycardia, drowsiness

Amitriptyline, Amoxapine, Desipramine, other Tricyclic antidepressants - Additive tachycardia, hypertension, drowsiness

Barbiturates, Benzodiazepines, Ethanol, Lithium, Opioids, Buspirone, Antihistamines, Muscle relaxants, other CNS depressants - Additive drowsiness and CNS depression

Non steroidal anti-inflammatory drugs (NSAID): Indomethacin, acetylsalicylic acid (aspirin) and other NSAIDs - Antagonize THC effects

Anti-cholinesterases: Physostigmine - Antagonizes the psychotropic effects and tachycardia produced by THC.

Theophylline: The metabolism of Theophylline is accelerated by THC. Thus, higher doses of Theophylline might be necessary.
Withdrawal Symptoms

- Headache
- Loss of appetite
- Inability to sleep
- Anxiety
- Physical tension
- Irritability or aggression

Interaction with other drugs or substances

- Amphetamines, cocaine, other sympathomimetic agents - Additive hypertension, tachycardia, possible cardio toxicity
- Atropine, scopolamine, antihistamines, other anticholinergic agents - Additive or super-additive tachycardia, drowsiness
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- Theophylline: The metabolism of Theophylline is accelerated by THC. Thus, higher doses of Theophylline might be necessary.
Ways of Administration

1. Inhalation - Inhaling through the nose (snorting)
2. Intravenous injection (shooting-up)
3. Subcutaneous injection (skin popping)
4. Smoking (freebasing or smoking crack)
5. Oral (ingestion)

Cocaine is one of the most popular drugs of abuse. It is a naturally occurring alkaloid found within the leaves of a shrub—called Coca leaves. It was first isolated from this plant in 1859 and it has been put to various uses since then, for example, in religious ceremonies, treating depression, asthma, as a local anesthetic and as component of certain medications. Due to its effect on the body, it is widely abuse and becomes drug of dependence. Cocaine can be taken alone, or in combination with some other drugs like heroin, amphetamine, caffeine, phenocyclidine (PCP), ephedrine, and ketamine.
COCOAINE – (CRACK)

- **Type:** crystalline powder
- **Family:** Erythroxylon coca
- **Chemical name:** Benzoylemethylecgonine
- **Common name:** crack, ’C’, base, blow, Charlie, Devil’s dandruff, marching powder, snow, ready rock and whiz bang if combined with heroin

**Characteristics and Global Facts**

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**Presentative symptoms**

- chest pain
- nasal septal perforation
- pneumothorax
- tachycardia or fibrillation
- severe hypertension
- stroke
- shock
- myocardial infarction
- kidney failure

**Effects**

**Physical**
- nausea and vomiting
- hyperactivity
- weakness
- weight loss
- seizures
- hyperthermia
- perspiration

Cocaine users mostly inhale its powder through the nose.
Cocaine affects mainly the central and peripheral nervous systems and its effects can be seen in all the major organs. Organs where the drug is concentrated include:

- Benzoylecgonine
- Active molecules

The onset of action or the effect on the body depends on the route of administration. The faster cocaine is absorbed, the more intense the high. Also, the faster the absorption, the shorter the duration of action. The high from snorting is relatively slow in onset, and may last 15 to 30 minutes, while that from smoking may last 5 to 10 minutes.

Diagnosis and symptoms of use or Dependence

- Euphoria
- Anxiousness
- Agitation
- Insomnia
- Delirium
- Paranoid psychosis
- Disorientation
- Hallucinations and delusions
- Mood disorder
- Bizarre, and violent behavior
- Muscle tremors or twitches
- Vertigo

Energetic, talkative, restless behavior

Restlessness, anxiety, or irritability

Increase in heart rate, temperature, and blood pressure

Mental alertness, especially to sight, sound, and touch

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Energetic, talkative, restless behavior

Restlessness, anxiety, or irritability

Increase in heart rate, temperature, and blood pressure

Mental alertness, especially to sight, sound, and touch
- cerebral infarction
- intracranial hemorrhage resulting from cocaine induced hypertension
- status epilepticus
- coma

**Psychological**
- Euphoria
- anxiety
- agitation
- insomnia
- delirium
- paranoid psychosis
- disorientation
- hallucinations and delusions
- mood disorder

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**Cocaine**

The onset of action or the effect on the body depends on the route of administration. The faster cocaine is absorbed, the more intense the high. Also, the faster the absorption, the shorter the duration of action. The high from snorting is relatively slow in onset, and may last 15 to 30 minutes, while that from smoking may last 5 to 10 minutes.

**Duration of the effects**

**Active molecules**

benzoylcegonine

**Organs where the drug is concentrated**

Cocaine affects mainly the central and peripheral nervous systems and its effects can be seen in all the major organs.

**Diagnosis and symptoms of use or Dependence**

- energetic, talkative, restless behavior
- restlessness, anxiety, or irritability
- increase in heart rate, temperature, and blood pressure
- mental alertness, especially to sight, sound, and touch
- bizarre, and violent behavior
- muscle tremors or twitches
- vertigo
When people mix cocaine and alcohol consumption, the human liver combines cocaine and alcohol and manufactures a third substance, cocaethylene, which intensifies cocaine’s euphoric effects, while potentially increasing the risk of sudden death.

Cocaine, when combined with some drugs such as isoniazid (INH), phenothiazines (e.g. thioridazine), theophylline, or tricyclic antidepressants (e.g. amitriptyline), may increase the risk of seizure.

### Interaction with other drugs or substances

- Fatigue
- Vivid unpleasant dreams
- Insomnia or hypersomnia
- Increased appetite, psychomotor agitation or retardation

#### Withdrawal Symptoms

- Mood change
- Fatigue
- Vivid unpleasant dreams
- Insomnia or hypersomnia
- Increased appetite, psychomotor agitation or retardation

When people mix cocaine and alcohol consumption, the human liver combines cocaine and alcohol and manufactures a third substance, cocaethylene, which intensifies cocaine’s euphoric effects, while potentially increasing the risk of sudden death.
• auditory hallucinations
• neglected daily routine
• temporary decrease in the need for food and sleep
• paranoid thinking and problems with reality testing

Withdrawal Symptoms
• mood change

Interaction with other drugs or substances

When people mix cocaine and alcohol consumption, the human liver combines cocaine and alcohol and manufactures a third substance, cocaethylene, which intensifies cocaine’s euphoric effects, while potentially increasing the risk of sudden death.

Cocaine, when combined with some drugs such as isoniazid (INH), phenothiazines (e.g. thioridazine), theophylline, or tricyclic antidepressants (e.g. amitriptyline), may increase the risk of seizure.
Codeine is an opiate used for its analgesic, antitussive and antidiarrhoeal properties. It is under the category of opiates and is turned into morphine by the body. Codeine is derived from the opium poppy and is related to morphine and heroin. Its purpose is to relieve pain and anxiety. This drug, like other opiates, not only has the potential to depress breathing but can depress other body systems as well.

### Characteristics and Global Facts

#### Effects

**Physical**
- stomach bleeding
- kidney and liver damage
- itchiness
- constipation
- nausea
- tiny pupils
- blurred vision
- poor night vision
- lowered heart rate, blood pressure and breathing
- convulsions
- sexual problems

**Psychological**
- disorientation
- hallucinations
- depression
- agitation

### Ways of Administration

Codeine can be administered orally (PO), subcutaneously (SC), intramuscularly (IM) and rectally (PR). Codeine free base can be smoked on aluminum foil.
• **Type:** Tablet, pill, suppository capsules, ampoules for injection
• **Family:** Opium Alkaloid
• **Chemical name:** Methyl morphine
• **Common name:** Tylenol 3W codeine, schoolboy, cough syrup

**Characteristics and Global Facts**

Codeine is an opiate used for its analgesic, antitussive and antidiarrhoeal properties. It is under the category of opiates and is turned into morphine by the body. Codeine is derived from the opium poppy and is related to morphine and heroin. Its purpose is to relieve pain and anxiety. This drug, like other opiates, not only has the potential to depress breathing but can depress other body systems as well.

**Ways of Administration**

Codeine can be administered orally (PO), subcutaneously (SC), intramuscularly (IM) and rectally (PR). Codeine free base can be smoked on aluminum foil.

**Presentative symptoms**

- tremors and seizures

**Effects**

**Physical**
- stomach bleeding
- kidney and liver damage
- itchiness
- constipation
- nausea
- tiny pupils
- blurred vision
- poor night vision
- lowered heart rate, blood pressure and breathing
- convulsions
- sexual problems

*Nausea and depression are consequences of codeine use*
Do not take codeine with other narcotic pain medications, sedatives, tranquilizers, muscle relaxers, or other medicines that can make a person sleepy or depress breathing. Dangerous side effects such as CNS depression may result. Alcohol combined with codeine can cause dangerous side effects like loss of coordination, impaired judgment, decreased alertness, drowsiness or death.

Withdrawal symptoms:
- runny nose
- sweating
- muscle pain and twitching
- headaches
- irregular heartbeat
- nausea and vomiting
- high blood pressure
- fever
- insomnia
- dehydration
- yawning
- weakness
- stomach cramps

Diagnosis and symptoms of use or dependence:

Codeine is an active ingredient in a number of prescription and over-the-counter medicines. As with any medicine, codeine can cause side effects. Some of these side effects may be serious. If you have any concerns about the side effects of codeine, talk to your doctor or pharmacist.

The most common side effects of codeine are:
- drowsiness
- constipation
- dry mouth
- headache
- nausea
- vomiting
- dizziness
- 6 hours Duration of the effects

Active molecules:
1-6 em&D

Organs where the drug is concentrated:
CNS, GI tract especially liver and biliary tract, respiratory tract

Interaction with other drugs or substances:
- do not take codeine with other narcotic pain medications, sedatives, tranquilizers, muscle relaxers, or other medicines that can make a person sleepy or depress breathing. Dangerous side effects such as CNS depression may result.
- alcohol combined with codeine can cause dangerous side effects like loss of coordination, impaired judgment, decreased alertness, drowsiness or death.

The organs where codeine is concentrated are:
- CNS
- GI tract especially liver and biliary tract
- respiratory tract

The duration of the effects of codeine is:
- 6 hours
**CODEINE**

**Duration of the effects**

1–6 hours

**Active molecules**

morphine

**Organs where the drug is concentrated**

CNS, GI tract especially liver and biliary tract, respiratory tract

**Diagnosis and symptoms of use or Dependence**

**Withdrawal Symptoms**

- high blood pressure
- fever
- insomnia
- dehydration
- yawning
- weakness
- stomach cramps

- • 1–6 hours
- • CNS, GI tract especially liver and biliary tract, respiratory tract
- • Active molecules: morphine
- • Organs where the drug is concentrated: CNS, GI tract especially liver and biliary tract, respiratory tract

**Interaction with other drugs or substances**

Do not take codeine with other narcotic pain medications, sedatives, tranquilizers, muscle relaxers, or other medicines that can make a person sleepy or depress breathing. Dangerous side effects such as CNS depression may result.

Alcohol combined with codeine can cause dangerous side effects like loss of coordination, impaired judgment, decreased alertness, drowsiness or death.
Heroin is a semi-synthetic opioid synthesized from morphine, a naturally occurring substance extracted from the seed pod of the Asian opium poppy plant. It usually appears as a white or brown powder or as a black sticky substance known as “black tar heroin.”

Heroin enters the brain and is converted to morphine and binds to opioid receptors. These receptors are located in many areas of the brain and body, and are especially important in the perception of pain. They are also located in the brain stem, important for automatic processes such as breathing, blood pressure and arousal.

Similar to other opioids, heroin is used as both pain-killer and recreational drug. Frequent and regular administration can quickly lead to tolerance and dependence. Heroin has a very high potential for addiction. If sustained use of heroin for as little as three days is stopped abruptly, withdrawal symptoms can appear.

**Characteristics and Global Facts**

Heroin can be injected, snorted/sniffed or smoked. These are common routes of administration that rapidly deliver the drug to the brain.

**Injection** is the use of a syringe and needle to release the drug directly into the bloodstream. **Snorting** is the process of inhaling heroin powder through the nose where it is absorbed into the bloodstream through the nasal tissues. **Smoking** involves inhaling heroin smoke into the lungs. All three methods of administration can lead to dependence and other severe health problems.

**Ways of Administration**

- **Injection** tools: tourniquet, syringe, among others

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Heroin injection tools: tourniquet, syringe, among others
• **Type:** white crystalline form  
• **Family:** 3, 6-diacetyl ester of morphine  
• **Chemical name:** diacetylmorphine; diamorphine  
• **Common name:** Smack, H, ska, junk, No (4)

### Characteristics and Global Facts

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### Ways of Administration

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### Physical

- **Central nervous system:**
  - Drowsiness
  - Disorientation
  - Delirium

- **Cardiovascular & Respiratory:**
  - Bradycardia
  - Hypotension
  - Hypoventilation
  - Shallow breathing
  - Respiratory depression

- **Eyes, Ears, nose, and mouth:**
  - Dry mouth
  - Miosis, or pupil constriction ("pin-point pupils")

- **Gastrointestinal:**
  - Nausea
  - Vomiting (protracted)
  - Constipation
  - Dyspepsia

- **Urinary System:**
  - Urinary retention

- **Musculoskeletal:**
  - Analgesia
  - Ataxia
  - Muscle spasticity

- **Neurological:**
  - Analgesia
  - Physical dependence

- **Skin:**
  - Itching
  - Flushing/Rash

- **Psychological:**
  - Anxiolysis (relief from anxiety)
  - Confusion
  - Euphoria
  - Psychological dependence
  - Somnolence (desire to sleep)
**Effects**

**Physical**

**Central nervous system:**
- Drowsiness
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**Duration of the effects**

4-6 hours

**Active molecules**

6-monoacetylmorphine

**Organs where the drug is concentrated**

- Cardio-vascular system - collapsed veins, infection of the heart lining and valves.
Pulmonary system - various types of pneumonia.

Vital organs such as the brain, liver, lungs, and kidneys - heroin often contains toxic contaminants that can clog the blood vessels, leading to the lungs, liver, kidneys or brain, causing permanent damage to these vital organs.

Withdrawal Symptoms
The withdrawal syndrome from heroin may begin within 6 to 24 hours of discontinuation of the drug. Symptoms are sweating, malaise, anxiety, depression, priapism, extra sensitivity of the genitals in females, general feeling of heaviness, cramp-like pains in the limbs, excessive yawning or sneezing, tears, rhinorrhea, sleep difficulties (insomnia), cold sweats, chills, severe muscle and bone aches, nausea and vomiting, diarrhoea, abdominal cramps and fever.

Diagnosis and symptoms of use or Dependence

- Changes in character (missing cash/valuables, stealing/borrowing money)
- Change in performance, academic or otherwise
- Apathy and/or lethargy
- Runny nose
- Lying/deception
- Change in friends
- Little or no motivation
- Ignores consequences of chosen behaviors
- Withdrawal from usual friends, activities, or interests
- Eyes appear "lost" or have a faraway look
- Slurred speech
- Loss of interest in usual healthy activities
- No interest in future plans
- Broken commitments
- Hostility towards others
- Unexplained absences at work, school or family events
- Poor self-image
- Difficulty in maintaining employment
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- Pulmonary system - various types of pneumonia.
- Vital organs such as the brain, liver, lungs, and kidneys - heroin often contains toxic contaminants that can clog the blood vessels, leading to the lungs, liver, kidneys or brain, causing permanent damage to these vital organs.

### Diagnosis and symptoms of use or Dependence

- Droopy appearance, as if extremities are “heavy”
- Alternately wakeful and drowsy
- Signs of injection; infections and needle scars on cubital fossa, back of knee, etc…
- Shallow breathing
- Euphoria
- Constricted pupils
- Nausea, vomiting
- Unclean appearance/hygiene issues
- Change in character (missing cash/valuables, stealing/borrowing money)
- Change in performance, academic or otherwise
- Apathy and/or lethargy
- Runny nose
- Lying/deception
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In combination with other central nervous system depressants including alcohol, benzodiazepines and methadone, heroin may have lethal effects even on experienced users. Cocaine sometimes proves to be fatal when used in combination with heroin.

Combinations of stimulants and depressants with heroin can have unpredictable and sometimes fatal results. Many drug users also die due to a combination of fentanyl and heroin.
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Combinations of stimulants and depressants with heroin can have unpredictable and sometimes fatal results. Many drug users also die due to a combination of fentanyl and heroin.
Inhalant users tend to be people who can’t get access to other drugs or alcohol, such as children, teenagers and marginalized individuals. The most serious inhalant abuse occurs among children and teens that live on the streets and have no family.

Most young people who experiment with volatile substances do so out of curiosity. They may experiment a few times with friends. Then a few, often those with personal, family or social difficulties, may be more vulnerable and develop problematic use. Problematic use starts to affect the individual’s life and becomes a higher priority than other things in their life.

Physically, the effects of VSA (volatile substance abuse) are similar to getting drunk. The main difference is that they can become affected very quickly and experience disturbing hallucinations.

**Types of inhalants**

**Solvents**
- Industrial or household solvents, including paint thinners or solvents, degreasers (dry-cleaning fluids), gasoline, dyes for shoes and glues
- Art or office supply solvents, including correction fluids, electronic contact cleaners, nail varnish, paint thinners, paint removers

**Gases**
- Gases used in household or commercial products, including butane lighters and propane tanks, cigarette lighter refills and refrigerant gases
- Household aerosol propellants such as spray paints, hair or deodorant sprays, air fresheners, furniture products
- Medical anesthetic gases such as ether, chloroform, halothane and nitrous oxide (laughing gas)
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Nitrites

Aliphatic nitrites, including cyclohexyl nitrite, which is available to the general public as room odorizers; amyl nitrite, which is available only by prescription in case of angina; and butyl nitrite, which is now an illegal substance (used to manufacture perfume)

Solids such as glues are usually put in a small bag and then inhaled. Liquids such as correction thinners, paint thinners or even petrol are usually poured and then inhaled. Those in gaseous state such as aerosols can be sprayed and inhaled. Some products are sprayed directly into the mouth or nose.

Ways of Administration

Effects

Physical

- headache, nausea and dizziness
- vomiting
- slurred speech
- wheezing
- unconsciousness
- palpitations and arrhythmia leading to heart failure
- suffocation and asphyxiation (damage to the lungs) leading to respiratory failure
- damage to the brain (memory and concentration)
- damage to nervous system, loss of control of fine movements
- liver, kidney and bone marrow damage

Psychological

- euphoria
- paranoia
- anxiety
- depression
- disorientation
- auditory and visual hallucinations
- emotional disturbances
- social isolation
- damage to the eyes (optic atrophy)
- damage to the inner ear (cochlea damage)
- sinusitis, nose bleeds
- spots around the mouth and nose
- damage to reproductive organs
- deaths and injuries due to traumatic accidents whilst intoxicated

Presentative symptoms

- vomiting or diarrhoea (after inhaling the gas)
- constriction of the pupils: (after inhaling the gas)
- muscle cramps or stiffness: (after inhaling the gas)
- blindness or temporary blindness: (after inhaling the gas)
- muscle weakness: (after inhaling the gas)
- dizziness or fainting: (after inhaling the gas)
- abdominal pain or muscle cramps: (after inhaling the gas)
- allergic skin eruptions: (after inhaling the gas)
- fainting or loss of consciousness: (after inhaling the gas)
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VolatIle substanCe or Inhalants

Inhaling glue

Nose bleeding

Nose bleeding
Brain (cerebral cortex, cerebellum, brain stem), CNS, cardiovascular system, lungs and respiratory tract, nose, alimentary canal including the stomach, liver, kidneys, bone marrow, eyes and ears.

Organs where the drug is concentrated largely depends on what product is being used.

Active molecules

Duration of the effects

• changes in sleep patterns and appetite
• changes in behaviour, e.g. tiredness, irritability, aggressiveness, mood swings
• changes in school performance
• changes in health, e.g. headaches, stomach aches, conjunctivitis, coughs

Withdrawal Symptoms

• sleep disturbances
• irritability
• insomnia
• delirium
• tingling
• tremors
• seizures
• muscle cramps
• chest and abdominal pain
• hallucinations or delusions

Diagnosis and symptoms of use or Dependence

• holding a pen or marker near the nose
• constantly smelling sleeves
• showing paint or stain marks on the face, fingers or clothing
• hiding rags, clothes or empty containers of potentially abused products in closets and other places

• a chemical smell on clothing, hair or breath
• empty or damaged butane gas, aerosol or glue containers (look for teeth marks on nozzles, towels with white marks, bags containing glue, etc.);
• disappearance of aerosols, glues, etc. from the home
• ‘drunken’ behaviour, such as lack of co-ordination and coherence
• changes in behaviour, e.g. tiredness, irritability, aggressiveness, mood swings
• changes in school performance
• changes in health, e.g. headaches, stomach aches, conjunctivitis, coughs

Withdrawal Symptoms

• sleep disturbances
• irritability
• insomnia
• delirium
• tingling
• tremors
• seizures
• muscle cramps
• chest and abdominal pain
• hallucinations or delusions
**Duration of the effects**

15-30 minutes

**Active molecules**

Largely depends on what product is being used.

**Organs where the drug is concentrated**

Brain (cerebral cortex, cerebellum, brain stem), CNS, cardiovascular system, lungs and respiratory tract, nose, alimentary canal including the stomach, liver, kidneys, bone marrow, eyes and ears.

**Diagnosis and symptoms of use or Dependence**

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**Withdrawal Symptoms**

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The combination of epinephrine and some anesthetic gases has resulted in ventricular irritability, serious cardiac arrhythmias or death. Causes of morbidity and mortality are related to the specific volatile chemical used, associated health risk behaviors, drug interactions or additional material found in the various inhaled products. Inhalant abuse is associated with the abuse of other substances, including pharmaceuticals, alcohol, tobacco and illicit drugs, which can obscure the diagnosis of inhalant abuse and increase potential morbidity. Combining other drugs with inhalants expands the potential for risk behaviors, altered drug metabolism, and drug interactions including enhancing the effect of drugs, particularly depressant effects.
Interaction with other drugs or substances

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Methadone is used medically as an analgesic, antitussive and maintenance anti-addictive for use in patients on opioids. Methadone is chemically unlike morphine or heroin, but the effects are much the same because it also acts on the opioid receptors, reducing withdrawal symptoms in people addicted to heroin, morphine or other narcotic drugs. It is not intended to reduce the use of non-narcotic drugs such as cocaine, marijuana, methamphetamine or alcohol. Methadone is also used in managing chronic pain due to its long lasting action and low cost.
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**Ways of Administration**
- Oral ingestion by pill, tablet and solution.
- Injection

**Effects**
**Physical**
- headache, dizziness, drowsiness
- nausea and vomiting
- allergic reactions (rash, hives, itching)
- tremors, muscle twitching
- slow or troubled breathing
- blurred or double vision
- facial flushing, sweating, palpitation

**Psychological**
- euphoria
- impaired concentration
- sensation of drunkenness
- confusion
- depression
- disorientation
- hallucinations

**Presentative symptoms**
- hypotension causing weakness and fainting
- dry mouth
- urinary retention
- constipation
Withdrawal Symptoms

Physical
- eyes tearing
- rhinorrhea
- sneezing
- diarrhoea
- fever
- chills
- increased heart rate
- aches and pains, often in the joints and/or legs
- elevated pain sensitivity
- elevated blood pressure

Psychological
- suicidal tendencies
- depression
- prolonged insomnia
- delirium
- auditory/visual hallucinations
- marked decrease in sex drive
- agitation
- anxiety
- panic disorder
- delusions

Diagnosis and symptoms of use or Dependence

The cerebrum and medulla of the central nervous system, smooth muscle and glandular secretions of the respiratory and gastro-intestinal tract, skin, lungs, liver and blood stream

Organs where the drug is concentrated

Levo-methadone molecules

Duration of the effects

4-24 hours
Withdrawal Symptoms
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Duration of the effects
4-24 hours

Active molecules
Levo-methadone molecules

Organs where the drug is concentrated
The cerebrum and medulla of the central nervous system, smooth muscle and glandular secretions of the respiratory and gastro-intestinal tract, skin, lungs, liver and blood stream

Diagnosis and symptoms of use or Dependence
Patients taking other opioid analgesics, general anesthetics, phenothiazines, other tranquilizers, sedatives, hypnotics or other CNS depressants (including alcohol) together with methadone may experience respiratory depression, hypotension, profound sedation or coma. Methadone may have additive effects when used in conjunction with alcohol, other opioids or illicit drugs that cause CNS depression. Deaths associated with methadone abuse frequently involve concomitant benzodiazepine abuse.
Interaction with other drugs or substances

Patients taking other opioid analgesics, general anesthetics, phenothiazines, other tranquilizers, sedatives, hypnotics or other CNS depressants (including alcohol) together with methadone may experience respiratory depression, hypotension, profound sedation or coma.

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Methadone can also be found in crystals and consumed by inhaling fumes when burnt.
Opium is the crudest form and also the least potent of the opiates. Opium is the milky latex fluid contained in the un-ripened seed pod of the opium poppy plant. When the fluid is exposed to air, it hardens and turns black in color. People have known about and used opium since ancient times. Initially it was used for the treatment of diarrhoea and then for the relief of pain. Today, the major medicinal use of opium is to treat extreme diarrhoea. Opium is also used to fight extreme pain in cancer patients. The drug is addictive, expensive, and when misused, it can be lethal. Opium misuse is becoming an epidemic in several rural states.

**Global Facts**

**Effects**

- **Physical**
  - decreased breathing rate
  - nausea, vomiting, sleepiness
  - constipation
  - low blood pressure
  - malnutrition and weight loss
  - itchy skin and sweating
  - reduced sex drive
  - increased urination
  - impaired vision

- **Psychological**
  - euphoria
  - relaxed, pain relief, stress and anxiety
  - calmness, sedation, decreased alertness
  - confusion
  - sense of emotional detachment
  - altered mood and mental processes
  - inability to concentrate

Opium is available in powder or dark brown solid form and is smoked, eaten or injected.

Ways of administration:

- Smoked
- Injected
- Tincture
- Powder
- Solid

**Presentative symptoms**

- abdominal pain
- vomiting
- nausea
- constipation
- drowsiness
- confusion
- disorientation
- hallucinations
- delusions
- agitation
- increased heart rate
- increased blood pressure

**Common opium use**

- Medication for pain relief
- Medication for diarrhea
- Medication for cough
- Medication for anxiety

**Side effects**

- Tachycardia
- Hypertension
- Nausea
- Vomiting
- Constipation
- Drowsiness
- Sopor
- Delirium
- Confusion
- Hallucinations
- Dizziness
- Tachypnea

**Treatment**

- Detoxification
- Medication
- Psychological counseling
- Support groups
- Hospitalization

**Prevention**

- Education about the dangers of opium use
- Awareness programs about the consequences of opium use
- Social and community support for individuals at risk of opium use
- Legal measures to restrict the availability of opium
- Reinforcement of the importance of traditional values and cultural practices that discourage opium use

**Conclusion**

Opium use has serious health consequences and can lead to addiction, harm to personal and family life, and societal problems. It is important to prevent opium use and provide the necessary support to those affected by opium misuse.
Opium is the crudest form and also the least potent of the opiates. Opium is the milky latex fluid contained in the un-ripened seed pod of the opium poppy plant. When the fluid is exposed to air, it hardens and turns black in color. People have known about and used opium since ancient times. Initially it was used for the treatment of diarrhoea and then for the relief of pain. Today, the major medicinal use of opium is to treat extreme diarrhoea. Opium is also used to fight extreme pain in cancer patients. The drug is addictive, expensive, and when misused, it can be lethal. Opium misuse is becoming an epidemic in several rural states.

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Effects

Physical

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- nausea, vomiting, sleepiness
- constipation
- low blood pressure
- malnutrition and weight loss
- itchy skin and sweating
- reduced sex drive
- increased urination
- impaired vision

Psychological

- euphoria
- relaxed, pain relief, stress and anxiety
- calmness, sedation, decreased alertness
- confusion
- sense of emotional detachment
- altered mood and mental processes
- inability to concentrate

Presentative symptoms

Malnutrition
The first of three addiction symptoms: **Physical dependence** - this occurs when the body adapts to the presence of a drug for its functioning. Withdrawal symptoms occur if the drug is suddenly stopped.

**Withdrawal Symptoms**
- nausea, vomiting
- rapid pulse
- increased blood pressure
- cold sweating
- muscle spasms, cramps, involuntary motions
- diarrhoea
- loss of appetite
- depression
- anxiety and agitation
- mood swings
- insomnia

**Tolerance** - the user's body adapts to the presence of a certain amount of the drug and then requires a higher dose of the drug to get the same effect.

**Psychological dependence** - when the user has a craving for the drug.

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When smoked, the opiate chemicals pass into the lungs, where they are quickly absorbed by blood vessels and sent to the brain. When it is eaten or mixed in a liquid, it has to pass through the stomach, upper intestines and into the liver before the brain.

In the brain, opium binds to the receptors responsible for pleasure-enhancing. Opium also inhibits muscle movement in the bowels. It works on the part of the brain that controls coughing and can dry out the mouth and the mucous membranes in the nose.
The first of three addiction symptoms

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- rapid pulse
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- muscle spasms, cramps, involuntary motions
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- loss of appetite
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- insomnia
- Tolerance - the user’s body adapts to the presence of a certain amount of the drug and then requires a higher dose of the drug to get the same effect.
- Psychological dependence - when the user has a craving for the drug.
Using opium with other substances that depress the central nervous system such as alcohol, antihistamines, barbiturates, benzodiazepines or general anesthetics, increases the risk of life-threatening respiratory depression.
Interaction with other drugs or substances

Using opium with other substances that depress the central nervous system such as alcohol, antihistamines, barbiturates, benzodiazepines or general anesthetics, increases the risk of life-threatening respiratory depression.
Tobacco use is the most popular form of substance abuse used by adults and teenagers worldwide. Smoking or chewing tobacco makes people feel good, even mildly euphoric. While there are thousands of chemicals in the tobacco plant, the main ingredient, nicotine (C10H14N2), is a liquid alkaloid. Nicotine is a powerful central nervous system stimulant found naturally in the tobacco leaf, and is classified as a drug. In higher doses, nicotine is extremely poisonous. It produces good feelings that draw people to use another cigarette or plug of tobacco. Besides, at least 19 different types of cancer-causing substances, called nitrosamines, are found in tobacco products.

When tobacco leaves are burned and inhaled, or absorbed through the mouth, the membranes in the nose, mouth, skin and lungs act as delivery media - transmitting nicotine into the blood and to the brain.

Tobacco can be smoked in cigarettes, cigars, or pipes. It can be chewed or, if powdered, sniffed. It is also consumed by placing it in the mouth against the gums for an extended period of time.
• **Type:** leaf  
• **Family:** Solanaceae  
• **Chemical name:** Nicotiana tabacum  
• **Common names:** smokes, cigs, fags, or butts, dokham, cavendish, perique, burley. Smokeless tobacco is often called chew, dip, spit tobacco, or snuff.

Tobacco use is the most popular form of substance abuse used by adults and teenagers worldwide. Smoking or chewing tobacco makes people feel good, even mildly euphoric. While there are thousands of chemicals in the tobacco plant, the main ingredient, nicotine, \((C_{10}H_{14}N_{2})\) is a liquid alkaloid. Nicotine is a powerful central nervous system stimulant found naturally in the tobacco leaf, and is classified as a drug. In higher doses, nicotine is extremely poisonous. It produces good feelings that draw people to use another cigarette or plug of tobacco. Besides, at least 19 different types of cancer-causing substances, called nitrosamines, are found in tobacco products.

When tobacco leaves are burned and inhaled, or absorbed through the mouth, the membranes in the nose, mouth, skin and lungs act as delivery media - transmitting nicotine into the blood and to the brain.

**Global Facts**

**Effects**

**Physical**

**Cutaneous**

• Premature aging and wrinkling of facial skin

**Head and Neck**

• Cataract
• Periodontal disease
• Oropharyngeal cancer

Tobacco can be smoked in cigarettes, cigars, or pipes. It can be chewed or, if powdered, sniffed. It is also consumed by placing it in the mouth against the gums for an extended period of time.
### Pulmonary
- Chronic obstructive pulmonary disease (COPD)
- Respiratory Infections (Tuberculosis, Pneumonia)
- Lung cancer

### Cardiovascular System
- Coronary artery disease
- Peripheral vascular diseases
- Aortic aneurysms

### Gastrointestinal
- Gastroesophageal reflux
- Peptic ulcers
- Oesophageal and stomach cancer

### Renal
- Renovascular disease
- Renal carcinoma

### Genito-urinary
- Erectile Dysfunction
- Bladder cancer
- Cervical cancer

### NeuroMuscular
- Stroke

### Psychological
- Happiness
- Mental relaxation
- Alertness
- Relief from stress
- Reduced appetite

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**Adrenal medulla, CNS, PNS, Lungs, Liver**

**Organs where the drug is concentrated**

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**Nicotine**

**Active molecules**

**Duration of Effects**
- 10 - 15 seconds - 1 hour

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**The simplest way is to detect tobacco use is to ask the patient.**

Besides, you can find out the following;

- Frequent colds
- Smoker's cough and gagging
- Dry, irritated throat
- Headache, nausea and dizziness
- Weakness
- Abdominal cramps
- Dulled sense of smell and taste (halitosis)

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Deadly lung cancer is very frequent among heavy cigarette smokers.
Pulmonary
- Chronic obstructive pulmonary disease (COPD)
- Respiratory Infections (Tuberculosis, Pneumonia)
- Lung cancer

Cardiovascular System
- Coronary artery disease
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Duration of Effects
10 to 15 seconds - 1 hour

Active molecules
Nicotine

Organs where the drug is concentrated
Adrenal medulla, CNS, PNS, Lungs, Liver

Diagnosis and symptoms of use or Dependence
The simplest way is to detect tobacco use is to ask the patient. Besides, you can find out the following:
- frequent colds
- smoker’s cough and gagging
- dry, irritated throat
- headache, nausea and dizziness
- weakness
- abdominal cramps
- dulled sense of smell and taste (halitosis)
yellow-brown discoloration of fingers and teeth
reduced stamina for exercise and sports
increase in heart rate, breathing rate and blood pressure

Withdrawal Symptoms

Physical
headaches
drowsiness
fatigue
nausea
stomach upset
decreased heart rate

Psychological
irritability
anxiety
restlessness
sleep disturbances
nervousness
cravings for tobacco
depression
insomnia
difficulty in paying attention

mixing tobacco with cannabis does not cut down the harmful effects of tobacco, and the use of them together can increase the risk of many cancers. By mixing the two drugs, the dependence on tobacco (nicotine) is associated with the effect of cannabis and can lead to dependence on both.

Women over 35 who smoke while taking the contraceptive pill are more likely to die from a heart attack or stroke.

Some prescription medication is absorbed into a smoker’s body more quickly than in a non-smoker’s. People who quit or reduce their smoking may need to have their medication levels reviewed by their health professional.

Interaction with other drugs or substances
• yellow-brown discoloration of fingers and teeth
• reduced stamina for exercise and sports
• increase in heart rate, breathing rate and blood pressure

Withdrawal Symptoms

Physical
• headaches
• drowsiness
• fatigue
• nausea
• stomach upset
• decreased heart rate
• increased appetite and weight gain
• changes in: body temperature, digestion, and muscle tone

Psychological
• irritability
• anxiety
• restlessness
• sleep disturbances
• nervousness
• cravings for tobacco
• depression
• insomnia
• difficulty in paying attention

Interaction with other drugs or substances

• Smoking in combination with alcohol consumption may increase the likelihood of a number of tobacco-caused cancers, especially those of the mouth, oesophagus and larynx.
• Mixing tobacco with cannabis does not cut down the harmful effects of tobacco, and the use of them together can increase the risk of many cancers. By mixing the two drugs, the dependence on tobacco (nicotine) is associated with the effect of cannabis and can lead to dependence on both.
• Women over 35 who smoke while taking the contraceptive pill are more likely to die from a heart attack or stroke.
• Some prescription medication is absorbed into a smoker’s body more quickly than in a non-smoker’s. People who quit or reduce their smoking may need to have their medication levels reviewed by their health professional.
Definition of substance abuse, tolerance and dependence

There is no universally accepted definition of substance abuse. However, common criteria among the several definitions that we can find should help us to understand the major characteristics of substance abuse:

Substance abuse is the overindulgence that leads to dependence on a drug, alcohol or other chemicals, leading to effects that are detrimental to the individual’s physical and mental health.

Substance abuse is harmful to your health and may even be deadly in certain situations.

Physical factors:

Physical tolerance occurs when the body gets used to the substance. Indeed, with long term use, the effect of the same amount of a substance decreases, so larger doses are required.

The amount consumed will need to be increased to achieve the desired effect; for example, drinking more in order to feel the expected effect. Physical tolerance is one of the criteria used to diagnose physical dependence.

Physical dependence is shown by withdrawal symptoms or discontinuation effects: it depends on the substance:

Alcohol withdrawal
Many alcoholics feel “shakes” between 12 and 24 hours after their last drink: tremor and tachycardia. Another very strong effect, called “Delirium Tremens”, can occur as well: it begins 3-5 days after the last drink. It is characterized by disorientation, fever, and visual hallucinations. Alcohol withdrawal is life threatening.

Opioid withdrawal
Opioid withdrawal starts a few hours after the last use. It is characterized by yawning, tearing, diarrhoea and abdominal cramping. Opioid withdrawal is physically very painful but not life threatening.

Amphetamine withdrawal
Amphetamine withdrawal is less difficult: increased appetite, abdominal cramping, diarrhoea and headache.
Stress and anxiety are common to abuse of many substances.
Cocaine and hallucinogen withdrawal
Cocaine and hallucinogen withdrawal do not have typical withdrawal manifestations: these drugs are considered more psychologically addictive rather than physically addictive. Treatment for physical dependence depends on the drug withdrawn. It includes the administration of another drug especially for substances that can be dangerous when abruptly discontinued.

Psychological factors:
Psychological tolerance is very personal and depends on the individual. Most of the time it is characterized by an uncontrollable need to use the substance even though the person knows that it is harmful and dangerous.

Some people are psychologically dependant on a substance without also being physically dependant. These people have developed a special link with the substance and cannot function “mentally” without it. Most likely withdrawal symptoms are anxiety, feeling depressed, stress and agitation.

Psychological factors refer to the meaning that the person gives to the substance. Each person has their own psychological reasons for taking drugs or alcohol. Substance abuse is a response to an individual’s psychological suffering.

Aggravating factors:
Dependence is the result of the person’s encounter with a substance in a given environment. This includes biological, psychological and social factors.

Early exposure to the substance: among addicted persons or users, we often find patients who have grown up in a risky environment, and may have, as a child, tried to use a substance. For example, alcohol can be part of a society’s culture that exposes people to alcohol from early childhood. A person’s environment during childhood influences their behavior.

Post-Traumatic Stress Disorder, major depressive disorder, anxiety and stress are aggravating factors. These mental disorders are the result of personal experiences such as shock, separation, exile, bereavement, loneliness and/or violent events.
အပွဲစီစဉ်မှုများ ဗုဒ္ဓယဉ်ဟောင်းများ ဖော်ပြရန်လည်း အောက်ပါ အခြေခံလိုသော အချက်အလက်များကို အခြေခံဖော်ပြသော အချက်အလက်များကို အထောက်အပြုထားသည်။ အခြေခံသော အချက်အလက်များကို အထောက်အပြုထားသည်။

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Social environment: Easy exposure to a substance, “temptation” and peer group pressure are aggravating factors.

**Overview of substance abuse based in the camps**

The majority of “substance abusers” in camps are alcohol dependants. Living in the camp has psychological consequences on the refugees’ mental health such as depression and anxiety.

Alcohol is first used in order to reduce suffering and anxiety and to “forget” the difficult conditions of life.

Alcohol in the camps is especially unhealthy. Indeed, bad products such as Yakaya or others toxins are mixed in during the preparation of alcohol. Alcohol has pleasurable short term effects, but it is very dangerous to the individual and community as a whole. Alcohol modifies the consumer’s behavior and mood, and can also lead to violence. SGBV is often linked with alcohol abuse.

Marijuana is very easy to find in the camps. It is a drug used by a lot of people in order to relax and reduce anxiety. Long term effects of marijuana use are mood changes and depression.

Alcohol and Cannabis can also be mixed in order to increase the effects of the drug.

Glue sniffing (primarily by children), opium and yabba are rarer but still exist.
Home-made alcohol is often toxic.

Home-made alcohol is often toxic.
Alcohol, just like any other drug, can cause dependence. Excessive and/or regular alcohol consumption is more than likely alcohol abuse, which is often the beginning of an alcohol dependence. Also called alcoholism, alcohol dependence is a problem that can affect people of all age groups, cultures, races, sexes and social classes.

Signs and symptoms of alcoholism vary, depending on the person and their tolerance for the drug. Sometimes ashamed of their dependence, alcohol dependants find themselves drinking in secret, hiding the fact that they are drinking, as well as how much they are drinking, from friends and family. This can make it more difficult to find out about their dependence. Some of the signs of dependence are the smell of alcohol on the breath, intoxicated or erratic behavior, combative and aggressive behavior, passive behavior that is not characteristic of that person and eyes that appear glazed over.

Alcohol dependants may also seem to have a lot of injuries and bruising that they can’t adequately explain, or that the alcohol dependant passes off without explanation, often because they can’t remember.

One of the worst symptoms of alcoholism is the feeling of having to drink; an insatiable thirst for an alcoholic drink. Physical withdrawal symptoms can occur if an alcohol dependant goes too long without a drink.

**Consequences of Alcoholism**

Alcoholism has important consequences on various levels both over the short and long term. The consequences of alcoholism affect not only the alcohol dependant person but also his family and social environment. The following list is not exhaustive but lists the main problems associated with alcoholism:

Please refer to alcohol card to find out the physical and mental effects of alcohol, both short and long term.

**Social and familial**

The social and familial problems arising from alcoholism can be massive and are partly caused by the serious pathological changes induced in the brain from prolonged alcohol misuse, or by the intoxicating effects of alcohol. An alcohol dependant’s behavior and mental impairment while drunk can profoundly impact surrounding family and friends.
თუ თქვის ადგილში ამოწმებით დიდი გამოწმობა ჰქონია, რომ მისი სიტყვათა არ ითხოვდებოდა. ამ მიწერით, თქვის ფორმა სწორად არჩებდა. მცირე გამოწმობა მისი სიტყვები არ ითხოვდებოდა, რათა აქ შეთქვათ. ამ სიტყვები შეიძლო გამოწმოდეს ამ ფორმით.

როგორც ამ მიწერში ჩამოთვლილი ადგილი, რომ შეთქვათ, სიტყვები არ ითხოვდებოდა. ამ ფორმით, თქვის სიტყვები შეიძლო გამოწმოდეს.

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Besides, the alcohol dependant will perform misbehaviour with others, resulting in decreased social reputation and become distant from friends. Drinking at inappropriate times and behavior caused by impaired judgment can lead to legal problems, such as criminal charges in the case of aggression.

Alcoholism can cause long term damage to the emotional development of the alcohol dependant’s children, even after they reach adulthood. The alcohol dependant could also lose the respect of others who see the problem as self-inflicted and easily avoided.

The impact of alcoholism on family and the social environment includes:

**Economic problems:**
- When the alcohol dependant uses family income for their alcohol consumption, this can cause a strain on the family finances and might, for example, lead to children’s poor feeding.
- Being drunk or hung over can reduce work activity or lead to employment loss, which can also cause financial problems. In addition, constant borrowing money and failure to return back the debt, quarrels and thefts can be the results.
- Health problems related to alcoholism can also place a financial strain on the family since the cost of treatment for some of the diseases due to alcohol misuse can be expensive and long term.

**Domestic violence:**
Studies of domestic violence frequently document high rates of alcohol and other drug involvement. Alcohol and drugs are known to impair judgment, reduce inhibition and increase aggression.

**Children:**
Children in the family of an alcoholic are particularly affected:
- A pregnant woman who drinks alcohol puts her baby at risk of Fetal Alcohol Syndrome (see chapter related to this point).
- Children growing up in a family with alcohol problems may suffer from lack of attention and care, including nutrition, and this can lead to physical and mental development problems as well as social integration problems.
- Inefficiency, poor performance, frequent accidents, accidents in schools, suspension from schools will be prone for school going age.
აღმოჩენით სწავლობის აღმასრულებელი ქურთული ქართული ლექსიკონი ამავე სწავლობის გასაზრდელგან სწავლების წლის წინა წლის პერიოდში.
Loss:
Each person serves a certain function in a family; as a father, mother, brother, sister, daughter, son, etc. The loss of an alcoholic family member and the gap that this loss leaves in the family network can deal a severe psychological blow to those family members and loved ones left behind. This loss can be due to
- Legal Issues: the alcohol dependant may go to jail as a result of their impaired judgment and behaviour.
- Death: this is a possible and even probable result for persons suffering from alcoholism.

Fetal Alcohol Spectrum Disorder (FASD) and Fetal Alcohol Syndrome (FAS)
Fetal Alcohol Spectrum Disorder (FASD) describes a continuum of permanent birth defects caused by maternal consumption of alcohol during pregnancy, which includes, but is not limited to, Fetal Alcohol Syndrome (FAS).

Research and clinical experiments have shown that prenatal alcohol exposure can cause a range of effects (including physical, behavioral and cognitive problems). The term Fetal Alcohol Spectrum Disorder, or FASD, was developed to include Fetal Alcohol Syndrome (FAS) as well as other conditions resulting from prenatal alcohol exposure.

Fetal alcohol exposure has consequences that can vary widely:
- Growth deficiency: defined as significantly under-average height, weight or both
- Facial features: several characteristic craniofacial abnormalities are visible in individuals with FAS, but these may be mild or even non-existent in other FASD conditions. They are mainly:
  - A smooth philtrum - the divot or groove between the nose and upper lip flattens
  - Thin vermilion – the upper lip thins
  - Small palpebral fissure - eye width shortens
- Central nervous system damage: the impact will vary according to the amount, timing and frequency of exposure as well as genetic predispositions of the fetus and the mother. The damage can cause abnormalities or impairments to structural, neurological and functional areas. The ten brain domains that may be impacted by prenatal alcohol exposure are: achievement, adaptative behavior, attention, cognition, executive functioning, language, memory, motor skills, sensory integration or soft neurological problems, and social communication.
Alcohol Damage (Mental)

The effects of alcohol on mental health can be severe. Prolonged alcohol use can lead to mental health problems such as depression, anxiety, and cognitive impairment. These effects can be acute, occurring immediately after a binge, or chronic, developing over time with regular use.

Alcohol can also cause physical damage to the brain, leading to conditions such as Wernicke-Korsakoff syndrome and alcoholic liver disease. These conditions can lead to a variety of symptoms, including memory loss, confusion, and cognitive decline.

In addition to these physical effects, alcohol use can also lead to social and emotional problems. People who use alcohol heavily may have trouble maintaining relationships, which can lead to feelings of isolation and depression.

Overall, the negative effects of alcohol on mental health are well-documented and should be taken seriously by individuals and society as a whole.

References:
**Fetal alcohol syndrome (FAS)**

It is a disorder that can occur when a pregnant woman ingests alcohol. It is the most precise and defined syndrome among the different types of disorders that can occur when a fetus is exposed to alcohol. Alcohol crosses the placenta and can stunt fetal growth or weight, create distinctive facial stigmata, damage neurons and brain structure, and cause other physical, mental, or behavioral problems. The main effect of FAS is permanent central nervous system damage, especially to the brain. Developing brain cells and structures remain underdeveloped or are malformed by prenatal alcohol exposure, often creating an array of primary cognitive and functional disabilities (including poor memory, attention deficit, impulsive behavior and poor cause-effect reasoning) as well as secondary disabilities such as mental health problems and drug addictions. (Studies indicate that a child whose mother consumed alcohol during pregnancy has more chance of becoming an alcohol dependant).

The risk of brain damage exists throughout pregnancy, since the fetal brain continues to develop. The following criteria must be fully met for a diagnosis of partial FAS:

1. Growth deficiency - growth or height may range from normal to deficient.
2. FAS facial features - two or three FAS facial features are present.
3. Central nervous system damage - clinically significant structural, neurological or functional impairment in three or more of the ten brain domains
4. Prenatal alcohol exposure - confirmed prenatal alcohol exposure

FAS is the only expression of FASD that has garnered consensus among experts to become an official diagnosis.

**CONCLUSION**

Alcohol dependants need treatment as soon as possible to minimize the damage that is done to their body, their social and professional life, and also to their family and social environment.

Alcoholism is a medical condition that can result in physical withdrawal symptoms, which can be dangerous if not treated.

Treatment comes in different forms. There is medication available to treat alcoholism, individual counseling and therapy sessions with a therapist, group therapy, Alcoholics Anonymous, and treatment centres that specialize in treating alcohol and drug addictions.
Management In substance abuse overdose.
Whenever drugs are used, there will be overdoses. We are all familiar with them. Some examples are the dizziness that comes with too much smoking or too much pan, as well as the shakiness in our hands when we drink too much tea. Usually these overdoses do no serious harm. But there are several drugs that can kill us when overdoses happen.

The four most common dangerous overdoses are with alcohol, amphetamines, benzodiazepines, and heroin. The overdose victim loses consciousness and cannot be woken up when you pinch them. They need you to help them. Turn them on their side and get medical help right away. Send someone else for help or take them to a health centre. Don’t leave them alone. If they vomit, they need you to help them breathe.

**How to help a person with an overdose**

Don’t leave them alone. A person with an overdose cannot save themselves. You are the only person who can help them.

Don’t be afraid to take them for immediate health care. You do not have to tell the health care provider that you use drugs, if so is the case. You only have to tell them that the person with the overdose does.

Don’t give them any medication. There are no antidotes for a drug overdose.

**Alcohol overdose**

Alcohol overdose is common and we have all seen a person with such a problem. The person falls unconscious and cannot be woken up. There is no antidote. Alcohol wears off after a few hours but vomiting is common. Roll the person onto their side and make sure they have not taken any other drug.

In alcohol overdose, with increased amount of alcohol intake, the patient will become drowsy and comatose.

In case of coma,

- Rehydrate with IV NSS (normal saline solution) when unconscious.
- If the patient can swallow, advise to take plenty of fluids (>3L) in order to remove the alcohol from the body.
- Find out for signs of hypoglycemia like sweating, hunger, tremors and dizziness. In serious cases, drowsiness, aggressiveness or irritable behavior, convulsions and coma can be detected.
- Check urine output and vital signs hourly until the patient gets conscious.
- Position the patient in lateral coma position due to the risk of aspiration pneumonia.
Injecting heroin alone
In case of agitation or violence,

- Administer Diazepam 10 mg IV, repeat if needed after 30 minutes.
- Provide rehydration (oral or IV) and treat hypoglycemia if detected.

**Amphetamine overdose**

Several types of amphetamines can be mixed together in the same tablet. The patient will suffer from severe hypothermia (very high body temperatures), seizures, acute renal failure, liver toxicity and heart problems.

- Administer chlorpromazine 25-50 mg IM rapidly will release acute agitation.
- Ammonium chloride 500 mg PO 4 hourly will be provided to increase the elimination of amphetamines.

**Benzodiazepine overdose**

Benzodiazepines such as diazepam, alprazolam, etc… are dangerous when they are used with other drugs such as alcohol or other tranquilizers. The person falls unconscious and cannot be woken up. There is no antidote. The person may be unconscious for several hours and may sleep for a day. Roll the person onto their side and make sure they have not taken any other drug or alcohol.

**Heroin overdose**

Although heroin overdose is not the most common overdose, it is one of the most well known. Anyone who lives in a community where heroin is used, knows of at least one person who has died of a heroin overdose.

There are three important issues to remember about heroin overdose.

First, most people suffer heroin overdose when they start to use heroin again after not using it for a while. Heroin overdose is more common when a person starts to relapse. And since addiction is a chronic relapsing disease, there can be many periods in a person’s life when heroin overdose can happen. When a heroin user often consumes, their body adapts to big doses. When they stop, their body loses the ability to adapt to big doses. So starting back again with big doses is too much and causes overdose.

Secondly, many heroin users use other drugs at the same time and the combination of heroin with other drugs increases the chance of overdose. Heroin injectors mix other drugs such as diazepam and other abusive substances in the same syringe. Or they take diazepam and other abusive substances and alcohol by mouth. Mixing drugs makes a heroin overdose deadly.
Naloxone vial
Finally, injecting alone makes overdose more deadly, because no one can help you. Fortunately, most heroin injectors have someone with them when they overdose. It takes courage to ask for help with an overdose but it has to be done.

Heroin overdose is easy to recognise as the person suffering an overdose falls unconscious and does not respond when you pinch them hard. Their eye pupils are very small. They should be rolled onto their side, so if they throw up they will not inhale the vomit. Naloxone can also be used as antidote. It can be injected IV, IM, or SC. Start with 0.4 mg and repeat once or twice more. But naloxone itself has several potential side effects on many body systems and drug interactions.

Generally in case of opioid, morphine and heroin overdose, the antidote is unavailable in our context so that treatment is symptomatic to prevent complications and sedation.

One approach to preventing drug overdose is drug dependency treatment or treatment for addiction. A person who is addicted to a substance, but who does not use the substance, cannot overdose. Twelve step programmes can help. So can behavioural programmes. If there is an oral substitution treatment programme or methadone programme, then a heroin user may be able to quit. But most people who quit go back to using. We can also encourage people to smoke or chase heroin rather than inject it, as it is hard to overdose while smoking or chasing heroin.

A harm reduction approach to heroin overdose prevention includes action on the three important issues above:

Addicts’ recovery is a good time to talk about the dangers of overdose during relapse. Don’t worry that your discussion will increase the chances of a relapse: the idea of a relapse is always in the head of a person with an addiction. Just remind them that a person starting to relapse must use a smaller dose than when they last consumed heroin.

Secondly, we can counsel people not to use other drugs or alcohol at the same time as heroin.
Finally, we can distribute naloxone vials to users. Naloxone distribution programmes have saved many lives in other countries. Why not here?

Overall, harm reduction related to substance abuse and overdose includes:

- Teaching drug users about the risks of different drugs and their uses.
- Explain thoroughly about the increased risks of transmitting infectious diseases like HIV, Hepatitis B, C, etc…among those who are sharing injecting equipments.
- Information on using drugs more safely, and reducing the harm of overdoses.
- Provide or offer medication to counteract a drug overdose.
- Education and referral to drug treatment opportunities.
- Permit drug users to exchange used syringes for new ones, or get new syringes.
- Outreach services in areas where drug uses are common.
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Treatment for substance abuse varies according to the types of drugs involved, amount of drugs used, medical complications and the social needs of the individual. The best type of recovery program for addicted persons depends on the addict’s personality, the type of substance of dependence, spirituality or religion, mental or physical illness, and local availability.

Many different ideas circulate about what is considered as a “successful” outcome in the recovery from addiction. Abstinence from addictive substances is generally accepted as a “successful” outcome, however different opinions exist.

**Psychotherapeutic approach**

The counselor and the patient have to work on the underlying problems which led the patient to abuse or misuse the substance(s).

Counselor and patient will also have to understand the “positive effects” of the substance and the role that the substance plays in the patient’s daily life. Patients use drugs and/or alcohol as a support in their life. For example, the role of alcohol may be to decrease anxiety. Abstinence is very hard to achieve because the patient uses the substance in order to feel better. Together, patient and counselor will try to identify the role of the substance in the patient’s daily life and the reasons for using them.

Counselor and patient will also have to work on the patient’s self esteem and understand the link that this has with the dependence itself. Many patients suffer from the fact that they know they are dependent and cannot do without the substance. The patient feels guilty about the situation and self esteem is very low. The counselor can help the patient improve their esteem.

Achieving abstinence is a very long process. The patient and the counselor will need to have regular meetings over an extended period of time. The counselor should be careful not to judge the patient (which could affect the patient’s self confidence) and should always be conscious of the physical and psychological difficulties related to achieving and maintaining abstinence. The counselor intervenes only as a support for the patient. The psychotherapeutic approach is helpful for patients because they need to talk, be listened to, be guided, and understand the process. It is very difficult for an addict to achieve abstinence without support.
Alcoholic patient

Alcoholic patient: အီလက်ရါသော လူသိများစွာ လူကြိုက်များ၀င်မှာ အိုက်ချင်းစွာ အခြေခံမှာများြ။

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Once a patient sets the goal of achieving abstinence, they can establish a sketch of their behavior relating to their substance use.

**Example of an alcohol dependant patient**

In which situation do I drink? What are my feelings (Before drinking, when I drink, after drinking)? Looking for alcohol (where do I find alcohol? from whom? money?), how do I drink (where? with whom), consequences (quarrels, violence, etc.)

These questions are helpful for the patient to think about when analyzing their own individual situation, and in understanding where their problems lie.

**Avoidance behaviors**

Denial and minimization of the problem are often part of the substance abuse mechanism. Substance addicts often think that they don’t have a problem. The work of the counselor is also to help the patient realize that they need to stop using substances. This must be done without judgment. It’s a difficult process. Step by step, the interviews will lead to this awareness; an understanding of the patient’s suffering and support, and positive attitudes to assist the patient stop using the substance.

**A therapeutic environment:**

A patient can change thanks to psychological and medical support: medical information given by doctors and counseling by psychologists is helpful. However, the external environment of an addict’s life will usually not change. Patients will have to protect themselves from temptation.

Examples of temptation are: specific persons, places, situations that may encourage the patient to use substances. The patient will have to avoid such temptation. The patient must know that they are supported by health workers and that they can find a place where help is available. If it is possible for the patient to access these services, then they can try to seek help immediately and avoid relapse.

The ultimate goal is to enable an individual to achieve lasting abstinence, but the immediate goals are to reduce substance abuse, improve the patient’s ability to function, and minimize the medical and social complications of substance abuse.
A thorough assessment:
There are different ways to assess dependence: specific tools exist, such as psychological scales, measurements, questionnaires. The counselor and the patient will evaluate together how strong the dependence is. With the help of counseling, the level of psychological dependence should progressively decrease. Using this kind of tools is helpful for patients; indeed, it’s hard to talk about abstract topics. Such tools assist the communication between counselor and patient and an understanding of the process.

A group process and peer assessment:
Working in a group is essential. “Talking groups” are easy to organize and do not require any special assistance: only 2 or 3 health workers such as a nurse, doctor and/or psychologist. Groups of patients are helpful for sharing experiences relating to substance abuse. Group meetings should generally occur once a week.

Some basic rules have to be respected: confidentiality, non judgment, no negative comments towards the rest of the group, respect of what others have to say etc.

Abstinent and dependent patients are often part of the same “talking group”. Sharing experiences about a common problem helps patients feel that they are not alone in a hard situation and encourages them. “Old” patients (who are abstinent) represent success for “recent” patients (who are still dependent). They will identify together all the difficulties of the process and will help each other to deal with the problem.

Prevention of relapse
There is a distinction between a slip and a relapse.

A slip is characterized by a resumption of one or two doses or drinks only. A relapse is characterized by a regression to dependence.

From the first individual counseling session, it is very important to work on preventing a relapse.

“Slips” are often part of the process, and the counselor has to explain this to the patient. Indeed, the desire to use substances is not only a matter of an individual’s personality; it also depends on the individual’s neurobiological processes and the special areas of the brain which control pleasure and desire.
Slips have to be analyzed by the patient and the counselor. The impact of the slip must not be ignored but must also not be dwelt upon. Counselor and patient should remain positive despite the slip and recognize together all the good work that they have achieved so far. A slip must not discourage the patient.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>CNS</td>
<td>Central Nervous System</td>
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<tr>
<td>PNS</td>
<td>Peripheral Nervous System</td>
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<tr>
<td>GI</td>
<td>Gastro-Intestinal System</td>
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<td>MAOI</td>
<td>Monoamine Oxidase Inhibitors</td>
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<tr>
<td>GABA</td>
<td>Gamma - amino Butyric Acid</td>
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<tr>
<td>ACE</td>
<td>Angiotensin Converting Enzyme</td>
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<td>THC</td>
<td>Tetrahydrocannabinol</td>
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<td>CBD</td>
<td>Cannabidiol</td>
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<td>PCP</td>
<td>Phenycyclidine</td>
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<td>INH</td>
<td>Isoniazid</td>
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<td>VSA</td>
<td>Volatile Substance Abuse</td>
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<td>COPD</td>
<td>Chronic Obstructive Pulmonary Disease</td>
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<td>SGBV</td>
<td>Sexual and Gender-based Violence</td>
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<td>IV</td>
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<td>IM</td>
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<td>FASD</td>
<td>Fetal Alcohol Spectrum Disorder</td>
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<td>FAS</td>
<td>Fetal Alcohol Syndrome</td>
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<td>NSS</td>
<td>Normal Saline Solution</td>
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