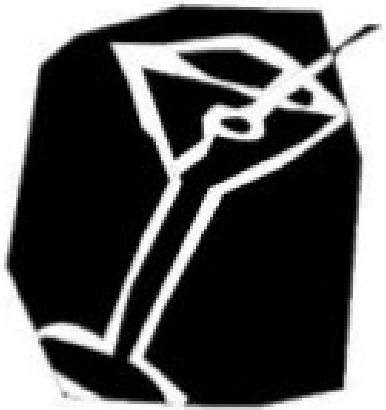
What is

ADDICTION

& Substance Abuse?

SUBSTANCE ABUSE

Disorders due to Psychoactive substance use refer to conditions arising from the abuse of Alcohol, Psychoactive drugs & Other Chemicals such as Volatile Solvents.



TERMINOLOGIES

Substance refers to any Drugs, Medication, or Toxins that shares the potential of abuse.

Addiction is a Physiological & Psychological dependence on Alcohol or other drugs of Abuse that affects the Central Nervous System in such a way that withdrawal symptoms are experienced when the substance is Discontinued.

Abuse refers to Maladaptive pattern of Substance use that impairs health in a board sense.

Dependence refers to certain Physiological & Psychological phenomena induced by the repeated taking of a Substance.

Tolerance is a state in which after repeated administration, a drug produced a decreased effect, or increasing doses are required to produce the same effect.

Withdrawal State is a group of signs & symptoms recurring when a drug is reduced in amount or withdrawn, which last for a limited time.

ICD – 10 CLASSIFICATION

F10 – F19 Mental & Behavior Disorders due to Psychoactive Substance Use.

F10 - Mental & Behavior Disorders due to use of Alcohol.

F11 - Mental & Behavior Disorders due to use of Opioids.

F12 - Mental & Behavior Disorders due to use of Cannabinoids.

F13 - Mental & Behavior Disorders due to use of Sedatives & Hypnotics.

F14 - Mental & Behavior Disorders due to use of Cocaine.

F16 - Mental & Behavior Disorders due to use of Hallucinogens.

COMMONLY USED PSYCHOTROPIC SUBSTANCE

- Alcohol
- Opioids
- Cannabis
- Cocaine
- Amphetamines & other sympathomimetics
- Sedatives & Hypnotics
  (Eg : Barbiturates)
- Inhalants (Eg : Volatile Solvents)
- Nicotine
- Other Stimulants
  (Eg : Caffeine)

ETIOLOGY

BIOLOGICAL FACTORS

Genetic Vulnerability :

Family History Of Substance use Disorders

Biochemical Factors :

- **Role of Dopamine & Nor-epinephrine have been implicated in Cocaine, Ethanol, & Opioid Dependence.**
- **Abnormalities in Alcohol dehydrogenase or in the Neurotransmitter mechanisms are thought to play a role in Alcohol Dependence.**

PSYCHOLOGICAL FACTORS

- General Rebelliousness
- Sense of Inferiority
- Poor Impulse Control
- Low Self-Esteem
- Inability to cope up with the pressures of living & society (Poor Stress Management Skills)
- Loneliness, Unmet needs
- Desire to escape from reality
- Desire to experiment, a sense of Adventure
- Pleasure Seeking
- Machoism
- Sexual Immaturity

SOCIAL FACTORS

- Religious Reasons, Peer Pressure
- Urbanization, Extended Period of Education
- Unemployment, Overcrowding
- Poor Social Support
- Effects of Television & Other Mass Media
- Occupation: Substance use is more common in chefs, Barmen, Executives, Salesman, Actors, Entertainers, Army, Personnel, Journalists, Medical personnel, etc.,

EASY AVAILABILITY OF DRUGS

- Taking Drugs Prescribed by the Doctors (Eg: Benzodiazepine Dependence)
- Taking drugs that can be bought legally without Prescription (Eg: Nicotine, Opioids)
- Taking Drugs that can be Obtained from illicit Sources (Eg: Street Drugs)

ALCOHOL DEPENDENCE SYNDROME

Alcohol Means Essence, anciently it called as Magnus Hass which is derived from Arabic Word.

Alcoholism refers to the uses of alcoholic Beverages to the Point of Causing Damage to the Individual, Society, Or Both.

(Or)

Chronic Dependence of Alcohol Characterized by Excessive & Compulsive Drinking that produce Disturbances in mental Or Cognitive level of functioning which interferes with social & Economic Levels.

PROPERTIES OF ALCOHOL

- Alcohol is a Clear Colored Liquid with a Strong Burning Taste.
- The Rate of Absorption of alcohol into the Blood stream is more Rapid than its Elimination.
- Absorption of Alcohol into the Bloodstream is Slower when food is Present in the Stomach.
- A Small amount is Excreted through Urine & a Small Amount is Exhaled.

EPIDEMIOLOGY

Incidence of Alcohol Dependence is 2% in India.

20 – 30 % of Subjects Aged Above 15years are Current Users Of Alcohol, & Nearly 10% of them are Regular Or Excessive Users.

15 – 30 % Of Patients are Developing Alcohol – Related Problems & Seeking admission in Psychiatric Hospitals.

CAUSES OF ALCOHOLISM

- Hard physical Labour, (Occupations – Bar mates, Medical Professionals, Journalists & Actors).
- A Sudden loss of Properties or Closed ones.
- Ignorance
- Suddenly a person Become a Rich / Poor.
- Disorders Like Depression, Anxiety, Phobia, & Panic Disorders.
- Biochemical Factors (Alterations in Dopamine & Epinephrine)
- Psychological factors (Low self Esteem, Poor Impulse, Escape From reality, Pleasure Seeking).
- Sexual Immaturity
- Social Factors (Over Crowding, Peer Pleasure, Urbanizations, Religious Reason, Unemployment, Poor Social Support, Isolation).

PROCESS OF ALCOHOLISM

- Experimental Stage
- Recreational Stage
- Relaxation Stage
- Compulsion Stage

CLINICAL FEATURES OF ALCOHOL DEPENDENCE

- **Minor Complaints :**

(Malaise, Dyspepsia, Mood Swings Or Depression, Increased Incidence of Infection)

- **Poor Personal Hygiene.**
- **Untreated Injuries (Cigarette Burns, Fractures, Bruises that cannot be fully Explained).**
- **Unusually High tolerance for Sedatives & Opioids.**
- **Nutritional Deficiency (Vitamins & minerals).**

- Secretive Behavior (may Attempt to Hide disorder or Alcohol supply).
- Consumption Of Alcohol-Containing products (Mouthwash, After-Shave lotion, Hair Spray, Lighter Fluid, Body Spray, Shampoos).
- Denial of Problem.
- Tendency to Blame others & Rationalize Problems (Problems Displacing Anger, Guilt, Or Inadequacy Onto Others to Avoid Confronting Illness).

ICD-10 CRITERIA FOR ALCOHOL DEPENDENCE

- A Strong Desire to take the Substance
- Difficulty in Controlling Substance Taking Behavior
- A Physiological Withdrawal State.
- Progressive neglect of Alternative pleasures or Interests.
- Persisting with Substance Use Despite Clear Evidence of Harmful Consequences

PSYCHIATRIC DISORDERS DUE TO ALCOHOL DEPENDENCE

- ✓ Acute Intoxication
- ✓ Withdrawal Syndrome
- ✓ Alcohol-Induced Amnestic Disorders
- ✓ Alcohol-Induced psychiatric Disorders

ACUTE INTOXICATION

It Develops During Or Shortly After Alcohol Ingestion.

It is Characterized by,

- Clinically Significant Maladaptive Behavior or Psychological Changes (Eg's: Inappropriate Sexual or Aggressive Behavior).
- Mood Lability
- Impaired Judgment
- Slurred Speech
- Inco-ordination
- Unsteady gait
- Nystagmus
- Impaired Attention & Memory
- Finally Resulting in Stupor or Coma.

WITHDRAWAL SYNDROME

- Person Who Have been Drinking Heavily Over a Prolonged period of time, Any Rapid Decrease in the amount of Alcohol in the Body is likely to Produce Withdrawal Symptoms.

These are:

- Simple Withdrawal Symptoms
- Delirium Tremens

SIMPLE WITHDRAWAL SYNDROME:

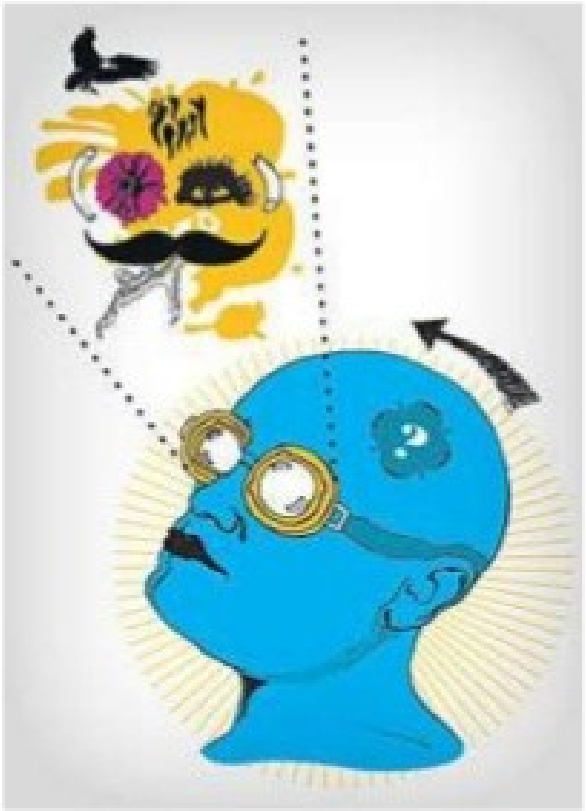
It is Characterized by,

- **Mild tremors**
- **Nausea**
- **Vomiting**
- **Weakness**
- **Irritability**
- **Insomnia**
- **Anxiety**

DELIRIUM TREMENS

It Occurs Usually within 2-4days of Complete or Significant Abstinence From Heavy drinking.

The course is Very Short, with Recovery Occurring within 3-7days.



It is Characterized by,

- A Dramatic & Rapidly Changing Picture of Disordered Mental Activity, with Clouding Of Consciousness & Disorientation in Time & Place.
- Poor Attention Span.
- Vivid Hallucinations which are Usually Visual, Tactile Hallucinations Can also Occur.
- Severe Psychomotor Agitation
- Shouting & Evident Fear
- Grossly Tremulous Hands which Sometimes Pick-Up Imaginary Objects; Truncal ataxia.
- Autonomic Disturbances Such as Sweating, Fever, Tachycardia, Raised Blood pressure, Pupillary dilation.
- Dehydration with Electrolyte Imbalances.
- Reversal of Sleep-Wake Pattern or Insomnia
- Blood tests to Reveal Leucocytosis & LFT
- Death may Occur due to Cardiovascular Collapse, Infection, Hyperthermia, Or self Inflicted Injury.

ALCOHOL-INDUCED AMNESTIC DISORDERS

Chronic Alcohol Abuse associated with Thiamine Deficiency (Vitamin B) is the most frequent Cause of Amnestic Disorders.

This Condition is Divided into :

- **Wernicke's Syndrome**
- **Korsakoff's Syndrome**

WERNICKE'S SYNDROME is Characterized by,

- Prominent Cerebellar Ataxia
- Palsy of the 6th Cranial Nerve
- Peripheral Neuropathy
- Mental Confusion

KORSAKOFF'S SYNDROME

The Prominent Symptoms in this Syndrome is Gross Memory disturbance.

Other Symptoms Include:

- Disorientation
- Confusion
- Confabulation
- Poor Attention Span & Distractibility
- Impairment of Insight

ALCOHOL-INDUCED PSYCHIATRIC DISORDERS

Alcohol Induced Dementia:

- It is a long term Complication of Alcohol Abuse, Characterized by Global decrease in cognitive Functioning (Decreased Intellectual Functioning & Memory).
- This Disorder tends to Improve With Abstinence, But Most of The Patients may have Permanent disabilities.

Gastro Intestinal Complications	Neurologic Complications
Chronic Diarrhea Esophagitis Esophageal Cancer Esophageal Varices Gastric Ulcers Gastritis Gastro Intestinal Bleeding Malabsorption Pancreatitis	Alcohol Dementia Alcoholic hallucinosis Alcohol Withdrawal Delirium Korsakoff's Syndrome Peripheral Neuropathy Seizure Disorders Subdural Hematoma Wernicke's Encephalopathy

Cardiopulmonary Complications	Psychiatric Complications
Arrhythmias Cardiomyopathy Essential Hypertension Chronic Obstructive Pulmonary Disease Pneumonia Increased Risk of Tuberculosis	Amotivational Syndrome Depression Impaired Social & Occupational Functioning Multiple Substance Abuse Suicide

Hepatic Complications	Other Complications
Alcoholic Hepatitis Cirrhosis Fatty Liver	Beri Beri Fetal Alcohol Syndrome Hypoglycemia Leg & Foot Ulcers Prosatitis

Complications From Alcohol Dependence

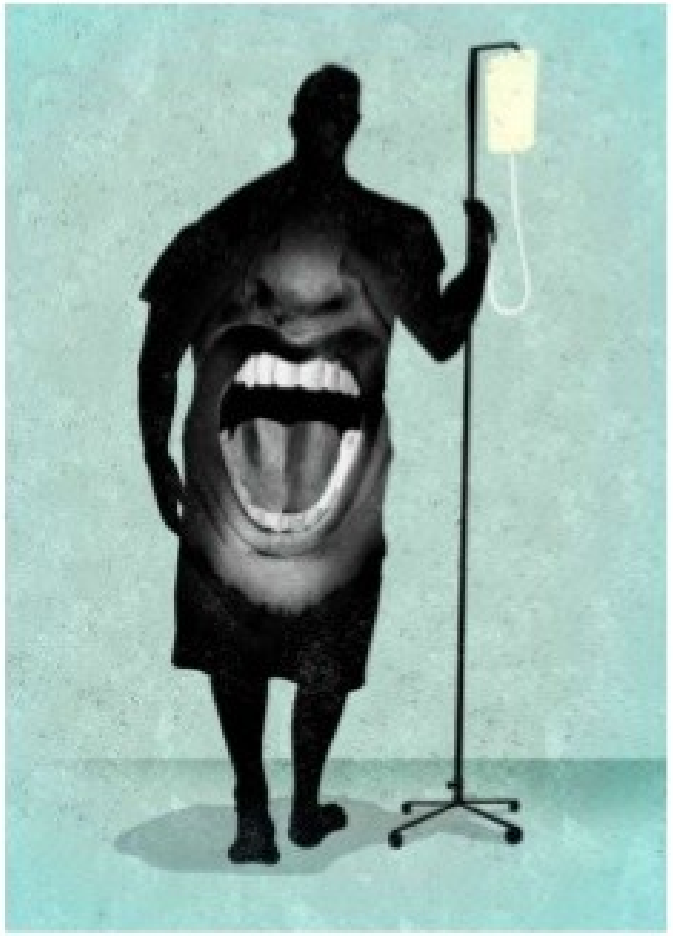
- Insomnia
- Depression
- Dementia
- Suicide
- High Blood Pressure
- Erectile Dysfunction (men)
- Bleeding in the Digestive Track
- Changes in Menstrual Cycle (women)
- Cancers of the Liver, Esophagus and Colon

DIAGNOSTIC EVALUATION

- History collection.
- Mental Status Examination.
- Physical Examination.
- Neurologic Examination.
- CAGE Questionnaires.
- Michigan Alcohol Screening Tests (MAST).
- Alcohol Use Disorders Identification Tests (AUDIT).
- Paddington Alcohol Test (PAT).
- Blood Alcohol Level to indicate Intoxication (200mg/dl).
- Urine Toxicology to reveal use of Other Drugs.
- Serum Electrolytes Analysis Revealing Electrolyte Abnormalities associated with Alcohol Use.
- Liver function Studies demonstrating alcohol related Liver Damage.
- Hematologic Workup Possibly revealing Anemia, Thrombocytopenia.
- Echocardiography & Electrocardiography demonstrating Cardiac Problems.
- Based on ICD10 Criteria.

TREATMENT MODALITIES

- Symptomatic Treatment.
- Fluid Replacement Therapy.
- IV Glucose to Prevent Hypoglycemia.
- Correction of Hypothermia / Acidosis.
- Emergency Measures for Trauma, Infection or GI Bleeding.



TREATMENT FOR WITHDRAWAL SYMPTOMS

DETOXIFICATION:

The Drugs of Choice are Benzodiazepines.

Egs: Chlordiazepoxide 80-200 mg/day

Diazepam 40-80 mg/day, in divided doses.

OTHERS:

- Vitamin B – 100mg of Thiamine Parenterally, Bd 3 to 5 days, Followed by Oral Administration for Atleast 6 months.
- Anticonvulsants
- Maintaining Fluid & electrolyte Balance
- Strict Monitoring of Vitals, Level of Consciousness & Orientation.
- Close Observation is Essential

ALCOHOL DETERRENT THERAPY

Deterrent agents are given to desensitize the individual to the effects of alcohol & Abstinence.

The Most commonly Used Drug is Disulfiram or Tetraethyl thiuram disulfide or Antabuse.

DISULFIRAM

Disulfiram is used to ensure Abstinence in the Treatment of Alcohol Dependence. Its Main effect is to Produce a rapid & Violently Unpleasant Reaction in a Person who ingests even a Small amount of alcohol While Taking Disulfiram.

DOSAGE:

Initial Dose is 500mg/day orally for the 1st 2weeks, followed by a maintenance dosage of 250mg/day.

The Dosage should not exceed 500mg/day.

INDICATIONS:

Disulfiram use is as an Aversive Conditioning Treatment for Alcohol Dependence.

CONTRAINDICATIONS:

- Pulmonary & Cardiovascular Disease
- Disulfiram Should be used with caution in patients with Nephritis, Brain Damage, Hypothyroidism, Diabetes, Hepatic Disease, Seizures, Poly-drug Dependence or an Abnormal EEG.
- High Risk for Alcohol Ingestion.

ACTION:

It is an Aldehyde Dehydrogenase inhibitor that interferes with the metabolism of alcohol & Produces a marked increase in blood acetaldehyde levels.

↓

Accumulation of acetaldehyde(more than 10 times which occurs in the normal metabolism of alcohol) produces a wide array of Unpleasant reactions Called DISULFIRAM-ETHANOL REACTION (DER).

↓

Characterized by Nausea, Throbbing headache, Hypotension, Sweating, thirst, Chest Pain, tachycardia, Vertigo, blurred Vision associated with Severe Anxiety.

ADVERSE EFFECTS:

Fatigue, Dermatitis, Impotence, Optic Neuritis, Mental Changes, Acute Polyneuropathy, Hepatic Damage, Convulsions, Respiratory Depression, cardiovascular Collapse, Myocardial Infarction, Death.

NURSING RESPONSIBILITY:

- An informed Consent should be taken before Starting treatment.
- Ensure that at least 12hours have elapsed since the last ingestion of Alcohol before Administering the Drug.
- Patient should be warned against Ingestion of any alcohol-containing preparations such as Cough Syrups, Sauces, Aftershave Lotions, Etc.,
- Caution patient against taking CNS Depressants & Over-the-Counter(OTC) Medications during disulfiram therapy.
- Instruct The Patient to avoid driving or other activities requiring alertness.
- Patients should be warned that the Disulfiram-alcohol Reaction may continue for as long as 1or 2 weeks after the last dose of disulfiram.
- Patients should carry identification cards describing Disulfiram-alcohol reaction & listing the name & phone number of the physician to be called.
- Emphasize the Importance of Follow-Up visits to the physician to monitor progress in long-term therapy.

PSYCOLOGICAL THERAPIES

PSYCHOLOGICAL THERAPY:

- Motivational Interviewing
- Group Therapy
- Aversive Conditioning / Therapy
- Cognitive Therapy
- Relapse Prevention Technique: This technique helps the patient to identify high-risk relapse factors & develop strategies to deal with them.
- Cue Exposure Technique: The technique aims through repeated exposure to desensitize drug abusers to drug effects, & thus improve their ability to Remain Abstinent.
- Assertive Training
- Behavior Counseling
- Supportive Psychotherapy
- Individual Psychotherapy

AGENCIES CONCERNED WITH ALCOHOL-RELATED PROBLEMS

- This is a self Help organization founded in the USA by 2 Alcoholic men Dr. Bob Smith & Dr. Bill Wilson On 10th june,1985.
- Alcoholic Anonymous considers Alcoholism as a Physical, Mental, Spiritual disease, a Progressive one, which can be Arrested but not Cured.
- Members attend Group meetings usually twice a week on a long – term basis.
- Each member is assigned a support person from whom he may seek help when the temptation to drink occurs.

- In Crisis he can obtain immediate help by telephone.
- Once Sobriety is achieved he is Expected to help others.
- The Organization works on the firm belief that Abstinence must be Complete.
- The only Requirement for membership is a Desire to stop drinking.
- There is no authority, but only a fellowship of imperfect alcoholics whose strength is formed out of weakness.
- Their primary purpose is to help each other stay sober and help each other alcoholics to achieve sobriety.

Al-Anon

This is a Group Started by Mrs. Annie, Wife of Dr. Bob to support the Spouses of Alcoholics.

Al-Teen

Provides Support to their Teenage Children.

Hostels

These are intended mainly for those rendered homeless due to alcohol-related problems. They Provide Rehabilitation & Counseling. Usually abstinence is a Condition of Residence.

NURSING MANAGEMENT

Nursing Assessment:

Recognition of Alcohol Abuse using CAGE Questionnaire

C – Have you ever felt you ought to CUT down on your drinking ?

A – Have People ANNOYED you by criticizing your drinking ?

G – have you ever felt GUILTY about your drinking ?

E – Have you ever had a drink first thing in the morning (An EYE – OPENER) to steady your nerves or get rid of a Hangover ?

NURSING DIAGNOSIS

- Risk for injury related to Hallucinosis, acute Intoxication evidenced by Confusion, Disorientation, inability to identify potentially Harmful Situations.
- Altered Health Maintenance related to inability to identify, manage or seek out help to maintain health, evidenced by various physical symptoms, Exhaustion, Sleep Disturbances, etc.,
- Ineffective Denial Related to weak, under-developed ego, evidenced by Lack of Insight, Rationalization of problems, Blaming Others, Failure to Accept responsibility for his Behavior.
- Ineffective individual coping related to impairment of adaptive behavior & Problem – Solving abilities, evidenced by use of substances as Coping Mechanisms.

CANNABIS USE DISORDER

- Its derived from hemp plant cannabis sativa.
- The dried leaves and flowering tops are often referred to as **GANJA** or **MARIJUANA**.
- The resin of the plant is referred to as **HASHISH**.
- Bhang is a drink made from cannabis.
- Cannabis is either smoked or taken in liquid form.

NICOTINE ABUSE DISORDER

- It is Obtained from "NICOTIANA TABACUM".
- It is one of the most Highly Addictive & Heavily Used Drug.

OPIOID USE DISORDERS

- The most Important Dependence Producing Derivatives are Morphine & Heroin.
- The commonly Abused Opioids (Narcotics) in our Country are Heroin (Brown Sugar, Smack)
- And the Synthetic Preparations Like Pethidine, Fortwin & Tidigesic.
- More Opiate Users had begun with Chasing Heroin (Inhaling the Smoke / Chasing the Dragon), they Gradually Shifted to Needle use.
- Injecting Drug users have become a high Risk Group for HIV Infection.

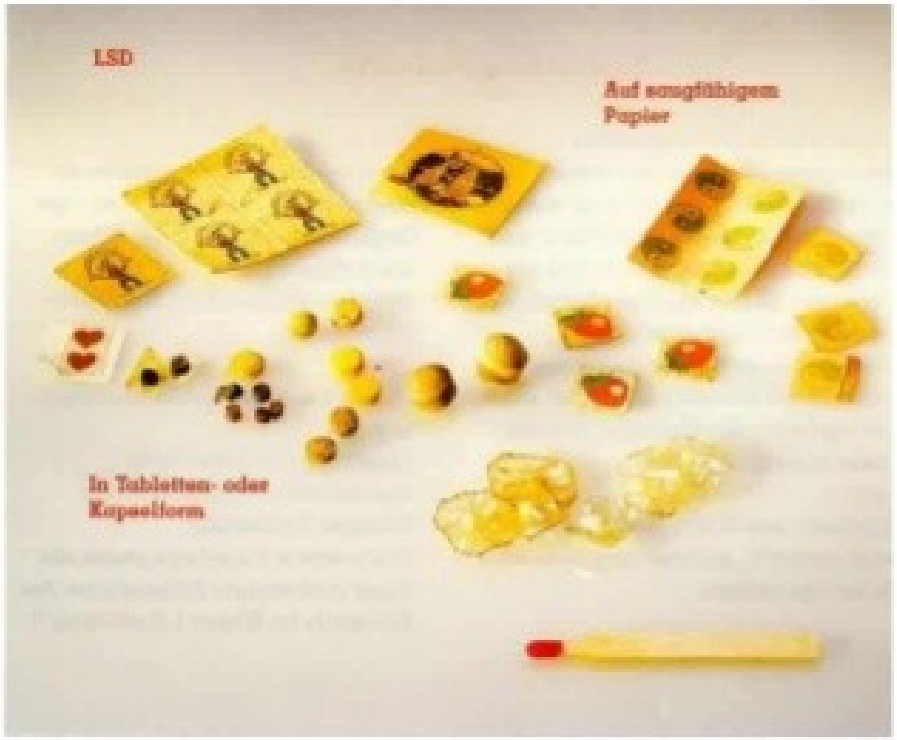
COCAINE USE DISORDER

- Cocaine is an Alkaloid derived from the Shrub *"ERYTHOXYLON COCA"*
- Common street name is *"CRACK"*
- In 1880 it is used as a Local Anesthesia.
- It can be administered orally, intra-nasally by smoking or parenterally.

LSD USE DISORDER

(LYSERGIC ACID DIETHYLAMIDE)

- A powerful Hallucinogen
- First synthesized in 1938.
- Produces its effect by acting on 5-Hydroxy Tryptamine (serotonin) levels in brain.
- A common pattern of LSD used in TRIP (followed by long period of abstinence)



BARBITURATE USE DISORDER

The Commonly Abused Barbiturates are seco - barbital, pento - barbital, amo - barbital.

INTOXICATION

- Acute intoxication characterized
- Lability of mood
- Disinhibited behavior
- Slurring of speech
- Inco-ordination
- Attention and memory impairment

INHALANTS / VOLATILE USE DISORDER

The Commonly used Volatile Solvents include

- **Petrol**
- **Aerosols**
- **Thinners**
- **Varnish remover**
- **Industrial solvents**

PREVENTION

PRIMARY PREVENTION

- Reduction of Prescribing by Doctors (Anxiolytics Especially Benzodiazepines)
- Identification & Treatment of Family Members who may be Contributing to the Drug Abuse.
- Introduction of social changes by

  - Putting Up the Price of Alcohol & Its Beverages.

  - Controlling / Abolishing the Advertising of Alcoholic drinks.

  - Controls On sales by Limiting Hours Or Banning sales in Super-Markets.

  - Restricting Availability & Lessening Social Deprivation (Governmental Measures).

PSYCHOLOGICAL THERAPY:

- Motivational Interviewing
- Group Therapy
- Aversive Conditioning / Therapy
- Cognitive Therapy
- Relapse Prevention Technique: This technique helps the patient to identify high-risk relapse factors & develop strategies to deal with them.
- Cue Exposure Technique: The technique aims through repeated exposure to desensitize drug abusers to drug effects, & thus improve their ability to Remain Abstinent.
- Assertive Training
- Behavior Counseling
- Supportive Psychotherapy
- Individual Psychotherapy

SECONDARY PREVENTION

- Early Detection & Counseling.
- Brief Intervention in Primary Care (Simple Advices from Practitioner & Educational Leaflet).
- Motivational Interviewing.
- A Full Assessment which Includes, Appraisal of Current Medical, Psychological & Social Problems.
- Detoxification with Benzodiazepines.

- Handling Negative mood States.
- Time Management.
- Anger Control.
- Financial Management.
- Developing the Work Habit.
- Stress management.
- Sleep hygiene.
- Recreation & Spirituality.
- Family Counseling – To Reduce Interpersonal Conflicts, Which may Otherwise Trigger **RELAPSE**.

REHABILITATION

The Aim of Rehabilitation of an Individual De -addicted from the Effects of Alcohol/Drugs.

- **To Enable him to Leave the Drug Sub – Culture.**
- **To Develop New Social Contacts, In this Patients First Engage in Work & Social Activities in Sheltered Surroundings & then take Greater Responsibilities for Themselves in Conditions Increasingly like those of Everyday Life.**
- **Continuing Social Support is Usually Required when the Person makes the Transition to Normal Work & Living .**

Do drugs control
YOUR LIFE?

Your life. Your community.
No place for drugs.