



Substance Use Disorders (SUDs)/ Addictions For MO





SUBSTANCE USE DISORDERS (SUDS)



Substance use disorders (SUDs) includes persistent use of drugs (psychoactive substances) causing harm to the person and serious adverse consequences to the individual's personal and social life.

A wide range of substances can lead to habit formation and addiction.

Etiopathogenesis of Addiction

A person can start using a substance for various reasons in various situations such as:

- Out of curiosity to experience the effects of a psychoactive substance



- As a way of coping for stressful situations such as financial difficulty, marital issues etc
- Due to underlying psychiatric illness such as depression, anxiety
- Cultural factors : for eg: use of bhang during holi in some parts of the country
- A drug prescribed for physical ailment: for eg: opioids for pain, benzodiazepines for insomnia



When a person uses a substance it can have various effects such as :

- **Acute intoxication:** A transient condition following the use of alcohol or other psychoactive substances resulting in alteration in level of consciousness, perception, mental functions, behaviour and other physiological functioning. The level of alteration depends on the quantity of substance used and blood levels of the substance.
- **Harmful use:** A pattern of psychoactive substance use that is causing damage to health. The damage can be in the form of physical damage (eg: alcohol liver disease) or psychological (eg: episodes of depression secondary to alcohol consumption)



- Addiction/ Dependence syndrome: A definitive diagnosis of dependence can be made only if the following symptoms were present together at some point in the last year:
 - A regular pattern of substance use, especially early morning usage is present
 - Experience withdrawal symptoms when he/she does not use or reduce substance amount



ASK

- HISTORY OF SUBSTANCE USE
- What substance the person uses:
 - Duration of use
 - Frequency: Daily/ Occasionally
 - Presence of withdrawal symptoms
 - Ask for motivation to stop alcohol

LOOK

- Look for medical problems on examination such as signs of liver failure, markers for IV drug use
- Look for withdrawal symptoms - Tremors, restlessness

FEEL

- Physical Examination: pulse rate, blood pressure,
- CHECK FOR ORIENTATION to time/place and person, MEMORY



TOBACCO ADDICTION

- Tobacco is used in various ways such as smoking, chewing, sucking, and gargling.
- Beedi smoking is the most popular form of smoking while cigarettes form the second most popular form.
- Chewing paan (betel leaf) with tobacco is the major form of smokeless tobacco use.
- Paan masala, gutka, and mawa are dry tobacco preparations with areca nut, which are popular and highly addictive.





Harmful Effects of Tobacco Use

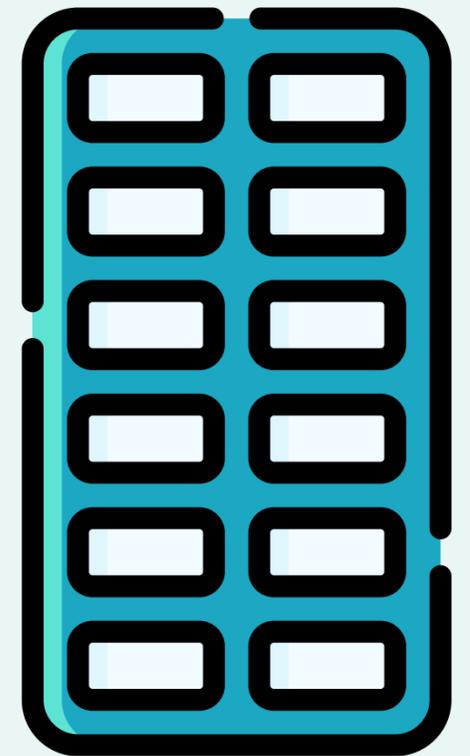
- Increased Risk of Cardiovascular Illnesses such as coronary artery disease, Stroke and Peripheral vascular Disease
- Respiratory illnesses: tobacco smoking is responsible for 82% of COPDs. Passive smoking is an important cause of respiratory infection, worsening of asthma and poor lung functions
- Cancer: Tobacco is known risk factors for various pre-cancerous lesions and cancers
- Sexual and reproductive health: Men with Tobacco addiction have a lower sperm count and quality. Maternal use during pregnancy leads to decreased fetal growth, abortions, pre term delivery and lower infant birth weight.





Diagnosis of Tobacco Addiction/Dependence-

The criteria mentioned in the general overview can be used to make a diagnosis of tobacco dependence syndrome. Also, Fagerstrom Test for Nicotine Dependence can be applied to arrive at a diagnosis



ALCOHOL USE DISORDERS

Types of alcohol

- Country liquor or 'desi sharab' (30%) and spirits or Indian-made foreign liquor (about 30%) are the most commonly consumed form of alcohol. The other forms of alcohol consumed include beer, home-brewed liquor, wine, and other illicit liquors.

Types of Alcohol Use disorders

1. Harmful Use: Here the person does not take alcohol regularly but heavy alcohol use leads to Health Problems or Social Problems (Domestic Violence, Loss of Job, Road traffic accidents etc).





2. Alcohol Addiction/ Dependence:

- Regular use of Alcohol, especially early morning drinking is present
- An experience of withdrawal symptoms when he/she does not use or reduce alcohol amount (two types mentioned below)

A person has to fulfill both criteria to make diagnosis of alcohol addiction.





Alcohol Withdrawal Symptoms

a) Simple Withdrawal: Tremors, sleep disturbance, craving, sweating, palpitations, some may experience hallucinations.

b) Complicated withdrawal: Seizures (which is generalised tonic clonic seizures occurring in cluster pattern), Delirium tremens – Confusion with tremors. These are emergency conditions that needs to be identified and treated immediately, or need referral to higher centre.

Diagnosis of Alcohol Addiction/ dependence

- The two criteria mentioned above in the general overview can be used to make a diagnosis of alcohol addiction/ dependence. Also, Alcohol Use Disorder Identification Test (AUDIT) can be applied to arrive at a diagnosis



HARMFUL EFFECTS OF ALCOHOL USE

- Gastrointestinal system: fatty liver, alcoholic hepatitis, cirrhosis, esophagitis, acute gastritis, pancreatitis and malabsorption
- Nutritional deficiencies: thiamine, pyridoxine, vitamin A, folic acid, ascorbic acid
- Haematological deficiencies: Anaemia, leukopenia, thrombocytopenia
- Cardiovascular system: Cardiomyopathy, hypertension
- Cancers: Oral, oesophageal, colon, hepatocellular and breast





- Central nervous system: Wernicke- Korsakoff's syndrome, dementia, cerebellar degeneration, peripheral neuropathy, myopathy
- Metabolic disorders: ketoacidosis, hypoglycaemia, hypocalcemia, hypomagnesmia
- Others: Fetal alcohol syndrome (teratogenic effect of alcohol), osteoporosis,
- Increased Road traffic accidents and domestic violence.
- Another important complication of alcohol addiction is Wernicke's Encephalopathy – Clinical features are Confusion, ophthalmoplegia and ataxia which is due to severe Thiamine Deficiency (Vitamin B1)





OPIOID ADDICTION



Types of Opioid substances used

Opioid Preparation	Street names and trade names of the opioid drugs
Heroin	Smack, brown sugar, white sugar, chitta, saaman, pudiya
Buprenorphine Injections	Norphine, lupi
Pentazocine injection	Fortwin
Codeine	Corex, phensydyl
Dextropropoxyphene	Proxyvon, spasmop, spasmoproxyvon
Tramadol	Spasmo plus
Opium	Afeem, doda, bhuki



OPIOID USE DISORDER- TYPES AND CLINICAL FEATURES



1.Opioid Harmful Use- Use of opioids leading on to some physical or psychological problem, even if not used regularly

2.Opioid addiction

- Regular use of opioids, almost every day
- Experience of withdrawal symptoms whenever opioid use is stopped or reduced



Opioid Withdrawal

a)Symptoms: Sweating, palpitations, diarrhoea, vomiting, restlessness, muscle cramps and aches, Sleep disturbances, excessive Yawning

b)Signs (On Examination): Tachycardia, Tachypnoea, Raised Blood Pressure, Dilated Pupils



CANNABIS USE DISORDERS

- Bhang is not illegal to consume which is an extract from the leaves of the cannabis plant.
- Cannabis use disorders mostly present with co-morbidity such as psychosis, unlike alcohol and opioid where withdrawal is a common presenting complaint. The treatment would be in lines with psychiatric presentation. Eg: If patient has psychotic symptoms then initiate antipsychotics and discuss about stopping the cannabis use.



TREATMENT GUIDELINES FOR SUBSTANCE USE DISORDERS

General component of treatment of Substance use disorders includes:

- Pharmacological management: Detoxification, Treating any medical complications due to substance use and Anti-craving medications
- Non-pharmacological Management: Non-Pharmacological management is an important component of treatment of Addiction.

For most of the patients visiting a primary care physician, interventions done at OPD for few minutes will help them to stop using the substance.





THE STEPS FOR BRIEF INTERVENTIONS ARE (FRAMES):

- **Feedback** of personal risk: Be clear in informing the person about how substance use is going to worsen his condition further
- **Responsibility:** emphasize the decision to quit is the patient's responsibility and choice, no one else can decide for them.
- **Advice:** give clear advice as a doctor about the disadvantages of substance use
- **Menu:** Discuss a variety of strategies for the patient to choose to achieve the goal such as keeping a diary, recognizing and avoiding trigger situations
- **Self-efficacy:** The patient has to be encouraged to be optimistic and to bring the changes in behavior



NON-PHARMACOLOGICAL MANAGEMENT OF CRAVING FOR SUBSTANCES

The following practical and simple strategies will help an individual with addiction to deal with craving for substances, can be applied for any substance: Remember the **5Ds**

- **Delay:** Delay the use of the substance when craving starts
- **Drink water:** Drinking water when experiencing craving will help curb it.
- **Distract:** involving in other activities/ hobbies is useful way to take mind away from the substance
- **Discuss:** talking about the craving with family/friends/ doctors/health workers helps to prevent relapse
- **Deep breathing exercises:** relaxing exercises such as deep breathing will help decreasing anxiety and distress which in turn decrease the risk of relapse





POINTS TO REMEMBER



- Relapse is a rule in addiction treatment.
- Avoid being judgemental and avoid confrontations.
- Suggestions and offer of help will be more readily be accepted if it is given in the spirit of concern for health and family well being.
- Remember to follow- up the patient regularly to review the progress.
- When patient is resistant to quitting, harm reduction strategies and even reducing the amount of use is good.
- Arrange for follow-ups and support by the CHO and other Health workers.



TREATMENT OF TOBACCO ADDICTION



Nicotine Transdermal Patch

- Nicotine transdermal patch to apply on clean, dry, non-hairy area of skin (typically upper arm or shoulder), and it should remain in place throughout the day.
- The patch is available in 7mg, 14mg and 21 mg.
- The initial dosage depends upon the number of cigarettes per day.
- For daily consumption of more than 20 cigarettes, initial dosage of patch should be 21mg.



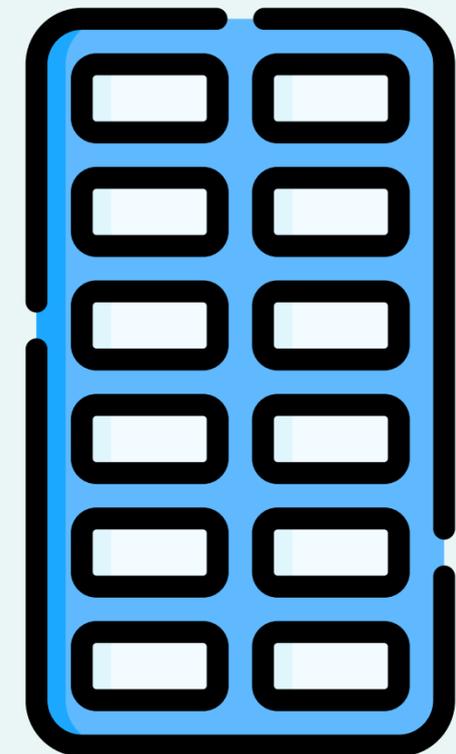
- For daily consumption of 10- 20 cigarettes, initial dosage of patch should be 14mg.
- For daily consumption of less than 10 cigarettes, initial dosage of patch should be 7mg.
- Initial dosage of the patch should be given for 6 weeks and then tapering should be done for every two weeks. For eg if the initial dosage is 21mg patch then 21 mg patch OD for 6 weeks, then 14 mg patch OD for 2 weeks & then 7 mg patch OD for 2 weeks).
- For intermittent craving that the patient experience Nicotine gums of 2mg can be used on SOS basis.





Nicotine Gum

- Nicotine gum to be used in chew and park technique (2 & 4 mg: Max 16 mg/day, to be used hourly for first 2 weeks then gradual taper and stop in 3 months).
- Please be aware that nicotine gum has poor acceptability and unpredictable effects, i.e., may not get desired effects



TREATMENT OF ALCOHOL USE DISORDER



Treatment of alcohol use disorder has two parts. One is treatment of alcohol withdrawal symptoms (detoxification) and other is management of addiction per se.

- Detoxification to control withdrawal symptoms is done using short-term and tapering doses of benzodiazepines (diazepam), as a replacement.
- All patients of alcohol use disorder suffer from deficiency of thiamine, so should be given high dose of thiamine supplementation.
- Craving is managed by using anti-craving medications (treatment for addiction per se).





PHARMACOLOGICAL MANAGEMENT - DETOXIFICATION TREATMENT



- The basic principle of detoxification is to substitute alcohol with a molecule that acts in similar way as alcohol in the brain, and then we gradually decrease it, so that the neurochemical change in brain gets reversed slowly (to prevent complicated withdrawal- seizures and delirium tremens).
- Benzodiazepines act on GABA receptor, which is where the alcohol too acts.
- When alcohol is stopped suddenly, there is relative excess of stimulants, leading to appearance of withdrawal symptoms.
 - Such patients having withdrawal symptoms should be started on benzodiazepine, preferably diazepam 40mg in divided doses (10mg – 10mg – 20mg), and gradually it can be tapered down 10mg every day starting with morning dose. Night dose of diazepam should be stopped at the end.





- If patient has visible icterus, it means the liver functions are deranged and for such patients lorazepam is preferred; as diazepam is metabolized through liver, but not lorazepam.
 - Lorazepam can be started at 8mg/ day in divided doses (2mg - 2mg - 4mg) and decreased 2mg every 2nd day starting with morning dosage.





CRAVING MANAGEMENT

- Craving should be managed by using anti-craving medications which can be started concurrently from 1st day of detoxification.
- Anti-craving medications include T. Acamprosate, T. Naltrexone, T. Baclofen or T. Topiramate.
- Operational guidelines for Mental, neurological and Substance use disorders at health and wellness centers makes provision of Naltrexone and National essential drug list makes provision of Baclofen at PHC's.



Sr. No.	Medication	Adult dose (mg/day)		Side effects
		Acute dose	Maintenance dose	
1	Naltrexone	50mg/day.	Same as acute dose	Hepatotoxicity occurs at dosages of more than 300mg /day.
2	Baclofen	30-60mg/day (in divided doses)	Same as acute dose	Drowsiness, feeling of weakness and backache

TREATMENT OF OPIOID USE DISORDER

- There are two important components in treatment of Opioid use Disorder, one is treating opioid intoxication and other is Opioid substitution therapy (so that patient does not relapse back into consuming opioid)
- Commonly used opioids are heroin followed by pharmaceutical opioids (pentazocine and dextro propoxyphene)





Managing Opioid Intoxication

- Opioid intoxication is characterized by pupillary dilatation, drowsiness, slurred speech, impaired attention
- Naloxone is the treatment of choice in case of opioid intoxication
- It has very short half-life of 60 – 90 min.
- Should be administered intravenously at dosage of 0.8mg, the dosage needs to be repeated with gradual hike in dosage till the signs of opioid intoxication get reversed.



Opioid substitution therapy

- It should start only after opioid withdrawal symptoms have appeared, which is generally after 2- 3 days of stopping opioids.
- Patient can be initially started on 2mg/day of buprenorphine (sublingual), which can be increased as per control of withdrawal symptoms.
- Generally, patients will require 2 – 6mg buprenorphine per day for adequate control of withdrawal symptoms.



Thank You

