ADDICTION, ALCOHOL DRUG ABUSE AND DEPENDENCY

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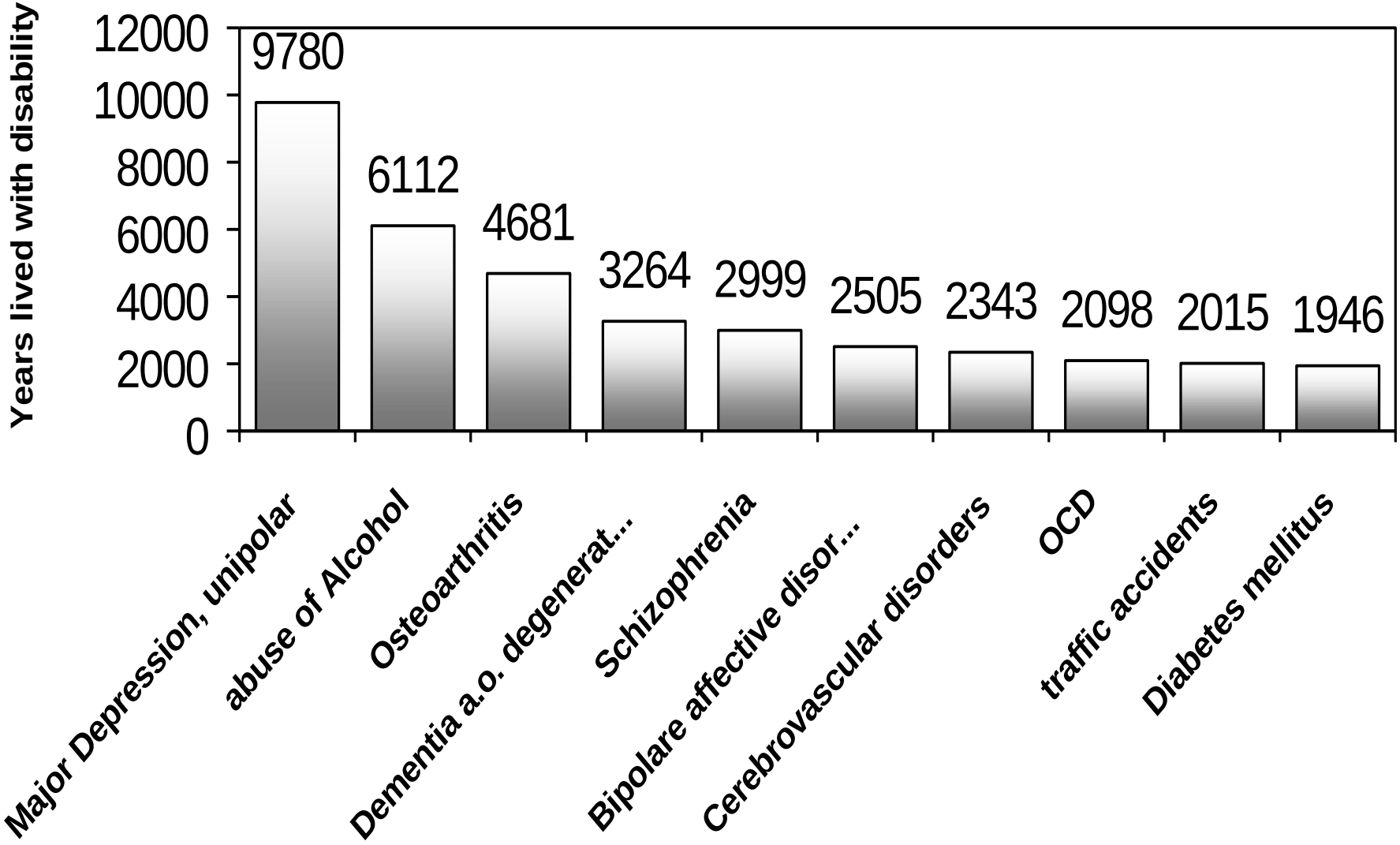
Comorbidity

2 or more psychiatric disorder in a single patient

- **Depression** (life-time prevalence of major depressive disorder)
  - 33-50% of opioid depents
  - 40% of alcohol dependents
- **Suicide**
  - 20 X more likely to commit suicide
- Antisocial Personality Disorder
  - Prevalence: 35-60% of patients with substance abuse or dependence

WHO-Studie: Global Burden of Disease (Murray u. Lopez 1997)



Substance Use

Several aspects:

- Moral
- Legal
- Economical
- Medical
- Scientific

Figure 1. Lot from the Bible, the first grape and the wine (cited by Osvath, Kovacs, Fekete; 2006)

Figure 2. Lot from the Bible, and the first drunkness (cited by Osvath, Kovacs, Fekete; 2006)

Addiction

In medicine, an **addiction** is a chronic neurobiological disorder.that has genetic, psychosocial, and environmental dimensions and is **characterized by one of the following:**

the **continued use** of a substance despite its detrimental effects,

impaired control over the use of a drug (compulsiv behavior), and

preoccupation with a drug's use for non-therapeutic purposes **(i.e. craving the drug).** Addiction can be behavior addiction.

Historical models - aetiology

- Ethical model (moralisation, guilt, holiday rite)
- **Disease model (learning, self-medicalisation)**
- Sociological model (deviancy)
- psychological, psychiatric, neurobiological models (failure in socialisation process, family games or enzim def...)
- **genetic vulnerability, depressive spectrum**

Reasons individuals may give for drinking excessively

Pleasure from the intoxicating effects. Boredom and loneliness ("alcohol is my best friend").

To treat depression (despite alcohol's being a depressant).
To treat anxiety (despite increased anxiety during the withdrawal phase).
To treat insomnia (despite impairment of deep sleep patterns).

- To cope with guilt and remorse (often over excessive drinking, creating a vicious cycle)
- To reduce physical pain.
- To reduce emotional pain (e.g., to numb feelings).
- To regain a feeling of normality ("I was born a pint low").
- To come down from the effects of stimulants (e.g., cocaine,…..
- To augment the intoxicating effects of other depressants (

Marylin Monroe

- **the clinical importance of alcohol-related disorders is essential for the practice of psychiatry.**

- Alcohol intoxication can cause irritability, violent behavior, feelings of depression, and, in rare instances hallucinations, delusions.
- Longer-term, escalating levels of alcohol consumption can produce tolerance as well as such intense adaptation of the body (dependency) that cessation of use can precipitate a
- withdrawal syndrome -marked by insomnia, evidence of hyperactivity of the autonomic system, anxiety.

Categories and Definitions for Patterns of Alcohol Use

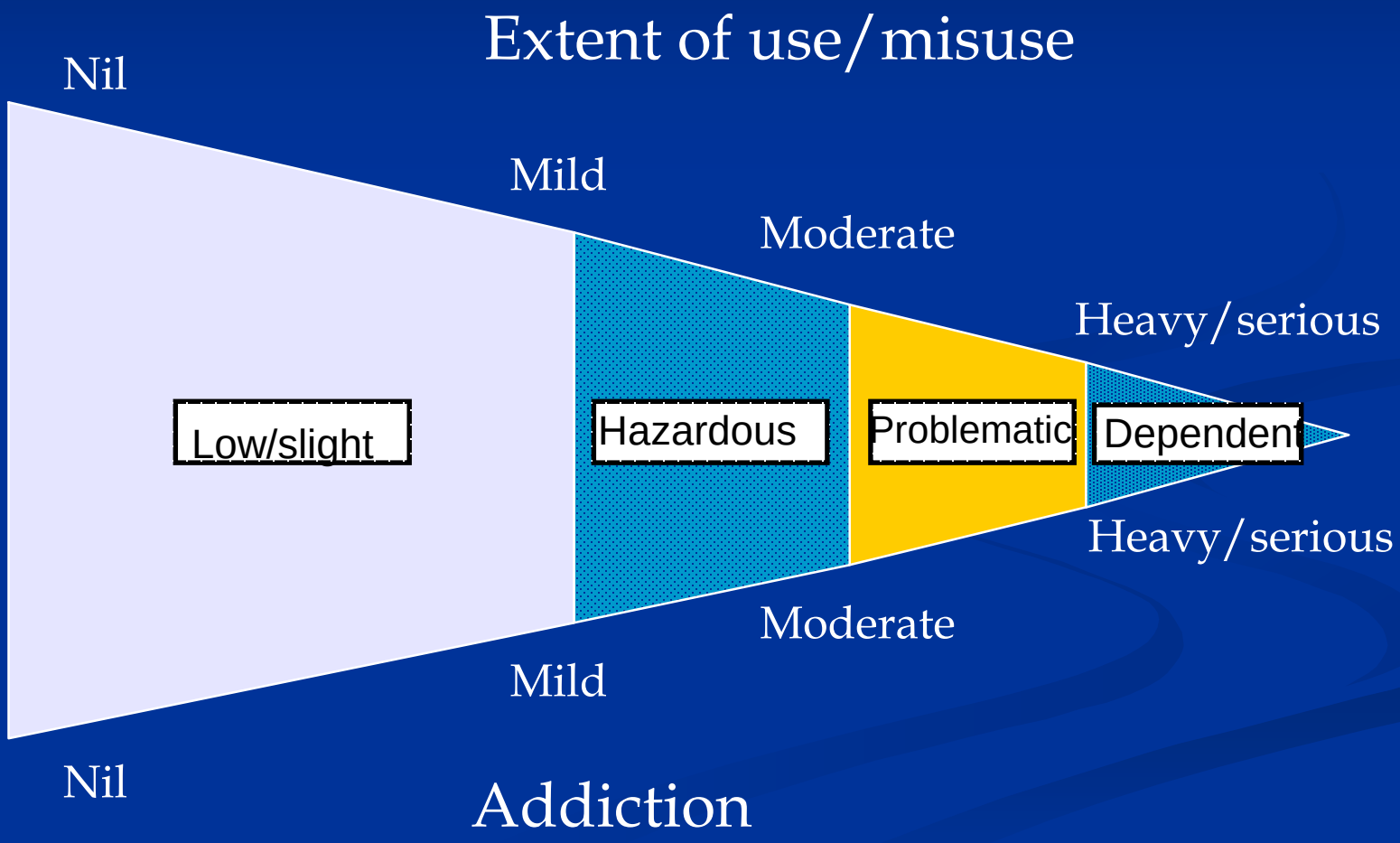
Category	Definition	Organization
Alcohol abuse APAAPA	Pattern of **pathologic, maladaptive use**, recurrent alcohol-related legal problems (e.g., citations for driving under the influence), continued use despite social or interpersonal problems caused or exacerbated by alcohol	APA
Alcohol dependence	**tolerance**; increased amounts to achieve effect; diminished effects from same amount; **withdrawal (abstinence) syndrome;** a great deal of time spent obtaining alcohol, using it, or recovering from its effects; important activities given up or reduced because of alcohol; drinking more or longer than intended; persistent desire or unsuccessful efforts to cut down or control alcohol use; continued use despite knowledge of a psychological problem caused or exacerbated by alcohol, loss of control	APA

DSM-IV criteria for substance dependence

A **maladaptive pattern** of substance use leading to clinically significant impairment or distress, as manifested by three (or m of the following, occurring at 12-month period:

1. Tolerance, as defined by either of the following:
   a. Need for markedly increased amounts of the substance to ac intoxication or desired e
   b. Markedly diminished effect with continued use of the same amount of the ubstance
2. Withdrawal, as manifested by either of the following:
   a. The characteristic withdrawal syndrome for the substance
   b. The same (or closely related) substance is taken to relieve o avoid withdrawal sympto
3. The substance is often taken in larger amounts over a longer pe
4. There is a persistent desire or unsuccessful efforts to cut down

Addiction spectrum



Alcohol withdrawal syndromes

- Minor withdrawal ("the shakes")
- Alcoholic seizures ("rum fits")
- Alcoholic hallucinosis
- Alcoholic withdrawal delirium (delirium tremens)

DSM-IV criteria for alcohol withdrawal

A. Cessation of (or reduction in) alcohol use that has been heavy and prolonged.

B. Two (or more) of the following, developing within several hours to a few days after criterion A:

1. Autonomic hyperactivity (e.g., sweating or pulse rate greater than 100)
2. tremor
3. Insomnia
4. Transient visual, tactile, or auditory hallucinations
5. Psychomotor agitation
6. Grand mal seizures

C. The symptoms in criterion B cause **significant distress or impairment in social, occupational**, or other important areas of functioning.

- The **self-destructive nature of alcoholism has both chronic and acute aspects.**

- In addition to cirrhosis of the liver and other medical complications, chronic self-destructive consequences of alcoholism include the disruption o family and other social relationships, other economic disadvantages.

- Acutely self-destructive behavior involves vulnerability to arrest, accidents suicide. In some reported series of suicides, alcoholism was the second most frequent retrospective psychiatric diagnosis

The most abused substances are (NIDA, 2013)

- Cocaine
- Heroin
- Inhalants
- K/2 Spice herbal mixtures (synthetic marijuana)
- LSD (Acid)
- Marijuana
- MDMA (Ecstasy)
- Methamphetamine
- Bath Salts (Synthetic cathiones: mephedrone, methylone, MDPV, pentedron…
- Club Drugs (GHB, ketamine and Rohypnol)
- PCP/Phencyclidine
- Prescripton Drugs

Etiology 1.

Dependence: *result from a persons's taking a substance in an abusive pattern. Why that person?*

Psychodynamic theory:

- Substance abuse ≅ oral regression, ≅ defense against anxious impulses, disturbed ego functions

Psychosocial theories:

- Societal factors
- Unstable childhood, family, subculture, etc.

Alkohol	DRD2 1A allél polimorfizmus (11q22-23)
	DAT polimorfizmus
	DRD3-, DRD4 polimorfizmus
	5HTR 1B receptor polimorfizmus
	5HTTP polimorfizmus
Ópiátok	μ receptor polimorfizmus
Nikotin	SLC18A2 (szinaptikus vezikuláris amin transzporter) polimorfizmus

8. ábra. Kendler és munkatársai (2003) által összegzett molekuláris genetikai tényezők addiktív betegségekben (idézi Osváth, Kovács, Fekete; 2006)

Etiology 2.

Behavioral theory *„Substance seeking behavior"*

Physical depence is not determinative

Positive reinforforcers: Positive experience after first use
⇒ substance seeking

Neurochemical factors

Particular neurotransmitters (opiate, dopamine, GABA)

low endogenous agonist activities High endogenous antagonist activity

Exogenous substance: long-term use modulates the receptor system

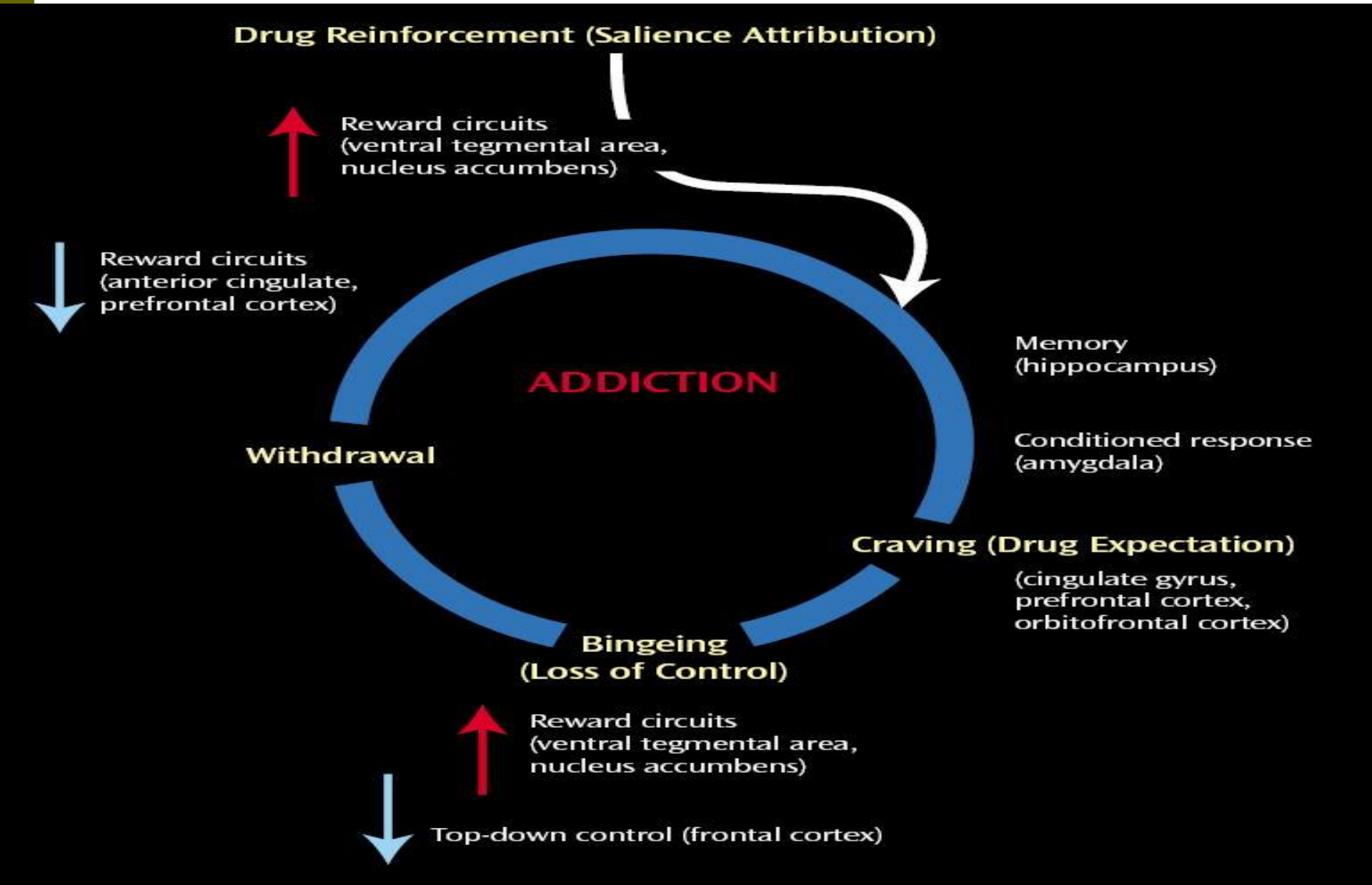
Brain reward circuitry:

VTA: dopaminergic neurons ⇒cortex, limbic regions, NA: Amphetamins, cocaine **LC:** noradrenergic neurons: opiates

Genetic factors (twins, siblings, adoptees studies)

Conclusive datas about alcohol dependency

Integrative model of brain and behavior: the I-RISA (Impaired Response Inhibition and Salience Attribution) syndrome of drug addiction



Addictive (dependence) potential

Very high: heroin (iv), crack cocaine

High: morphine, opium (smoked)

Moderate/high: cocaine (powder), tobacco, PCP

Moderate: Diazepam, alcohol, amphetamines (oral)

Moderate/low: caffeine, MDMA (ecstasy) marijuana, ketamine

Very low: mescaline, psilocybin, LSD

Neurobiological Considerations

- The neurotransmitters GABA and glutamate are both involved in the mechanism of action of alcohol intoxication withdrawal
- Alcohol increases the activity of the inhibitory neurotransmitter GABA and decreases the activity of the excitatory neurotransmitter glutamate. Changes in these t neurotransmitters work during acute alcohol withdrawal t increase membrane excitability and the potential for seizu activity
- Repeated episodes of alcohol withdrawal may sensitize (i.e., kindle) membrane excitability
- Currently, GABAergic (BZDs) are the primary medicat

Etiological Formulations of Alcohol-Related Disorders

- **Genetic/familial formulations:** Alcohol-related disorders are more prominent in individuals with a family history of alcohol. Men and women differ in their ability to detoxify alcohol, possibly due to differences in lean body mass, liver size, or the activity of enzymes that metabolize alcohol in the liver.
- **Behavioral and learning** formulations:
- Alcohol-related disorders develop because the individual learns by observing, during the developmental years, family members who drink.
- **Psychological formulations**: Alcohol reduces stress caused by a superego (to reduce self- imposed guilt over heavy drinking).
- Alcohol reduces inhibition (i.e., the superego "dissolves" in alcohol), and – consequences

Etiological Formulations of Alcohol-Related Disorders

- Social and cultural formulations:

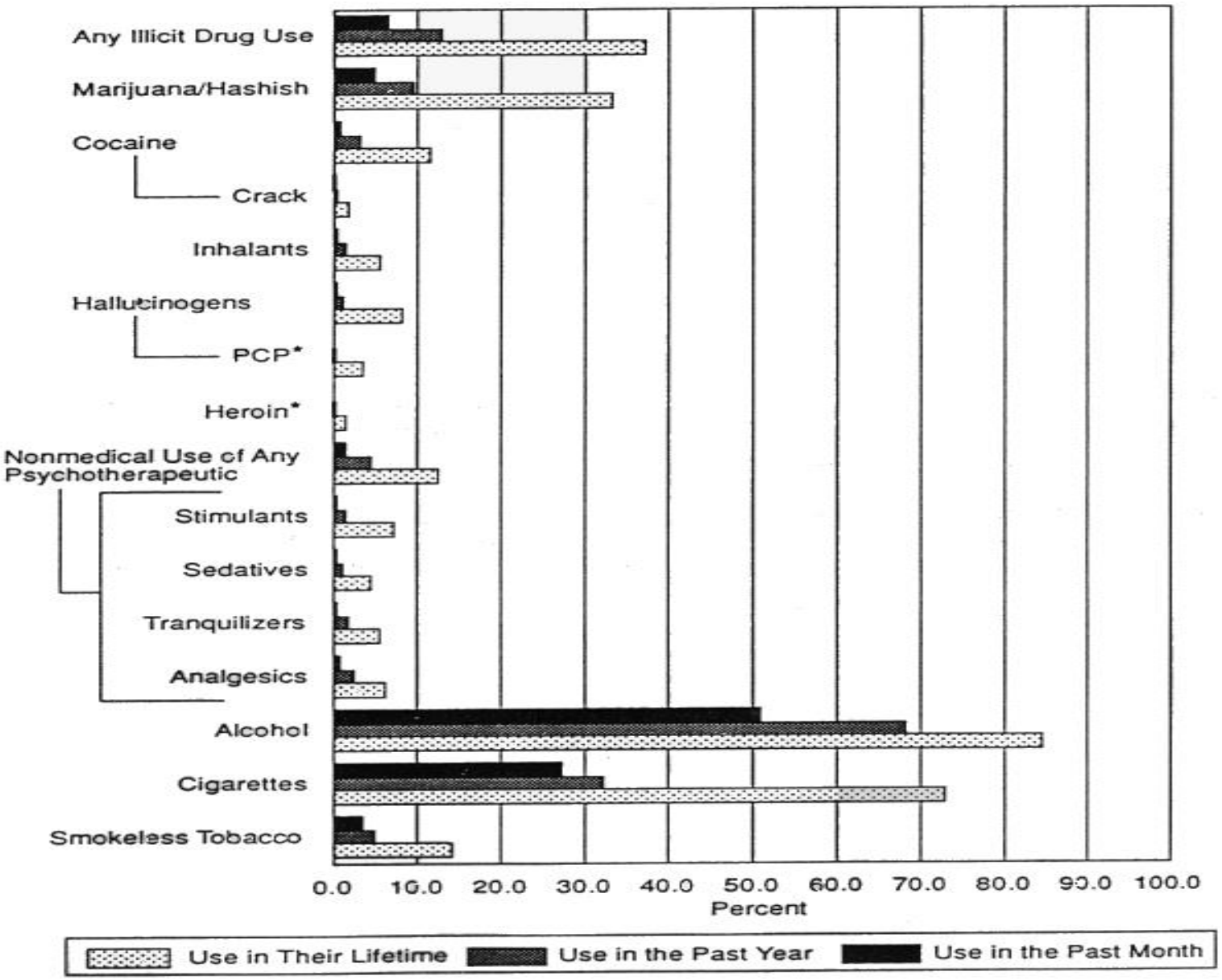
- Certain social settings predispose to excessive drinking (e.g., college campuses, military bases).

- Certain cultural groups predispose to excessive drinking (e.g., adolescents, Psychological formulations:

- Alcohol is used to self-medicate or modulate anxiety, depression,

Chemical and behavioural dependency spectrum - loss of control

- **Vulnerability, genetic background**
- **Primary or secundary (dual diagnosis)**
- **culturally prescribed, or tolerated habits, availability, individual**
- **personality traits,**
- **direct group-impacts,**
- **interpersonal conflicts**


Any Illicit Drug Use
Marijuana/Hashish
Cocaine
Crack
Inhalants
Hallucinogens
PCP*
Heroin*
Nonmedical Use of Any Psychotherapeutic
Stimulants
Sedatives
Tranquilizers
Analgesics
Alcohol
Cigarettes
Smokeless Tobacco
0.0 10.0 20.0 30.0 40.0 50.0 60.0 70.0 80.0 90.0 100.0
Percent
Use in Their Lifetime
Use in the Past Year
Use in the Past Month

Suicide attempt study in Hungary, Pecs, 2002 (n=4408; adolescents 15-16 y, self-reported, anonymous)

- direct and indirect self destruction overlap
- significant alcohol and illegal drug consumption in the suicide group (also cannabis, nicotin)

- In the suicide group, in *70%* of the cases occurred past month *heavy drinking*

- *Marihuana/hasis* consumption occurred past month in 9% of the sample, in *25% of suicide attempters, in 40% of the repeaters* (more males than females)
-

Therapy – alcohol, drugs

- (1)**detoxification, involving medications** and supportive measures to minimize effects of the drug and of its withdrawal;
- (2**) substitution therapy** with related drugs, which may be temporary (as in withdrawal of sedatives)
- (3) deterrents to further ingestion of alcohol (e.g., disulfiram)
- (4**) antianxiety or antidepressant** medication;

- **(5) group and individual psychotherapies intended** to alter neurotic characteristiscs that promote psychological dependence.

Recommendations for management of alcoholism

1. The alcoholic person needs acceptance, not blame.
2. , it is always possible that the next rehabilitation may work.
3. Treatment of withdrawal syndromes should take place in an inpatient setting if the patient has a history of severe "shakes," hallucinations, seizures, or delirium tremens.
4. 4. Be sure to manage the patient's other emotional problems as well (e.g., panic disorder, depression),
5. Refer the patient to Alcoholics Anonymous to provide ongoing support and encouragement from persons similarly affected.
6. Be sure to include the family in the treatment process.

Clinical features influencing treatment

1. Psychiatric factors

   a) Risk of suicide or homocide

   b) Comorbid psychiatric disorders

   c) Use of multiple substances

2. Comorbid general medicai disorders

3. Pregnancy

Clinical features influencing treatment

44. Age
    a) Children and adolescents
    b) The elderly
5 Social milieu or living environment
6. Cultural factors
7. Family characteristics

Pharmacologic treatments

1. Medications to treat intoxication or withdrawal states
2. Medications to decrease the reinforcing effects of abused substance
3. Medications that discourage the use of substances
4. Agonist substitution therapy
5. Medications to treat comorbid psychiatric conditions

- Treatment of alcohol dependence begins with detoxification aimed at normalization of metabolic processes

- prevention of withdrawal delirium and seizures. correction of electrolyte imbalance; treatment of infection; and (usually) administration of intravenous fluids

- These therapies should continue until the medical condition has normalized.

Management of alcohol withdrawal syndromes

1. B1 vit. folic acid
2. carbamazepine, in patients with a history of withdrawal seizures
3. Haloperidol: 2-5 mg bid for patients with alcoholic hallucinosis

- diazepam 10 mg (or lorazepam 2-4 mg), followed by 5-mg doses every 5 minutes until calm.

Once the patient is stabilized, the dose may be tapered slowly
over 4 or 5 days

- Seclusion and restraints as necessary
- Adequate hydration and nutrition

Considerations for the therapy

- Antipsychotic medications can help reduce psychotic symptoms (e.g., hallucinations) or escalating anxiety
- Benzodiazepines) can help reduce excessive autonomic hyperactivity (e.g., elevated BP , pulse).
- Beta-blockers (e.g., propranolol) can help reduce excessive autonomic hyperactivity and somatic anxiety
- For persons experiencing withdrawal seizures, an antiepileptic medication (e.g., phenytoin, carbamazepine) if seizure activity continues

After detoxification, recommendations include one of the following:

- Continued treatment on an outpatient basis.

- Continued somatic and/or psychosocial treatment in a 21- to 28-day inpatient treatment program (helpful for patients who fail to stop drinking after repeated attempts at detoxification), possibly followed by a 6- to 24-month program in a long-term treatment facility.

Psychosocial treatments

1. Cognitive behavioral therapies
2. Behavioral therapies
3. Individual psychodynamic/interpersonal therapies
4. Group therapies
5. Family therapies
6. Self-help groups

Learn from the patient

Do you trust or respect any drug user?

There is a lot to be learned from a drug addict.

The most common self-help group in the world community is Alcoholics Anonymous (AA) and other types of 12-step groups (Narcotics Anonymous.etc).

Convincing your patient to attend an AA (NA, CA) meeting can be a challenge.

Support meetings AA - NA:

- Narcotics Anonymous is a 12-step programs focusing on total abstinence, reduction of stress, and a "one day at a time" philosophy.
- Frequent meetings (e.g., "30 meetings in 30 days") and a sponsor who has been drug-free for at least 1 year are recommended.
- The first step is to acknowledge lack of power over drugs

Support meetings AA:

- **Alcoholics Anonymous - a 12-step programs focusing on total abstinence, reduction of stress, and a "one day at a time" philosophy**. Frequent meetings (e.g., "30 meetings in 30 days") and a sponsor who has been alcohol-free for at least 1 year are recommended. The first step is to acknowledge lack of power over drinking.

- Al-Anon provides support for spouses and family members of individuals with drinking problems.
- .

- Alcoholics Anonymus (AA) is a well-known self-help organization for alcoholics that has the primary goal of perpetual sobriety for its members.

- The approach is inspirational ans spiritual, and members are expected to assist in rehabilitating other alcholics whom they bring to regular group meetings. ..for a number of alcoholics, who receive limitless support in their struggles to maintain sobriety, recover self-esteem, and rebuild relationships with families, friends..


thank you for your attention
We are committed to preserving the delicate balance between man and nature.

Addictive (dependence) potential

Very high: heroin (iv), crack cocaine

High: morphine, opium (smoked)

Moderate/high: cocaine (powder), tobacco, PCP

Moderate: Diazepam, alcohol, amphetamines (oral)

Moderate/low: caffeine, MDMA (ecstasy) marijuana, ketamine

Very low: mescaline, psilocybin, LSD

Recommendations for management of psychoactive substance abuse

1.Do not let your personal beliefs and attitudes about drug abuse interfere with your care of the addict.

. Patients need consistent yet firm handling.

. Neither condemn addicts nor condone their behavior.

2. Be sure to consider both medical and psychiatric comorbidity. Many addicts have potentially serious medical problems that require treatment , other substances, mood disorders,

3. Be prepared for relapses during the rehabilitation phase of treatment. Relapse is alost inevitable, but it does not represent failure of the treatment program.

4. Support groups, to community-based organizations

Drugs may produce intense state of pleasure

Cocaine

My body was full of energy and at the same time completely relaxed.

I felt like a total body orgasm.

I feels like every cell and bone is in your body is jumping with delight.

Coca

D

Drugs may produce intense state of pleasure

Ecstasy

There is a pervasive body warmth.

The hot bath was so good I could not speak.

I felt like your head blowing up… a pleasant warmness and intensive feeling of relaxation.

Drugs may produce intense state of pleasure

Heroin

It is like the relaxed feeling you get after sex but better.

My body felt instantly warm, especially my cheeks, which felt quite hot.

You feel as if you have been wrapped in the most pleasing, warm, and comfortable blanket in the world.


© W.P. Armstrong 2004

View addicion as an active affair

The addict usually lives in denial of the addiction or simply does not believe that resulting behavior has contributed to relational problems.

The addict is 'married' to the drug of choice.

Sometimes partners collude in or enable the addiction because it serves some underlying psychological or practical needs in them.

Commonly abused drugs

Stimulants

Amphetamine – *Black Beauties, Crosses, Hearts*

Cocaine – *Coke, Flake, Rocks, Snow*

Methamphetamine – *Crank, Crystal, Ice, Speed*

Nicotine – *Cigarettes, Snuff*

Betel nut, khat (the fourth most widely used drug in the world, after nicotine, ethanol and caffeine)


Cannabis
Marihuana
Haschisch

Commonly abused drugs

Hallucinogens

LSD – *Acid*

Mescaline – *Cactus, Mesc, Peyote*

Phencyclidine – *PCP, Angel dust*

Psilocybin – *Magic mushroom, Purple passion*

Amphetamine – ***MDMA, Ecstasy***, *Adam*

Marijuana – *Grass, Weed, Herb, Pot, Smoke*

Hashish – Hash

High Tetrahydrocannabinol – *THC, Skunk*

Commonly abused drugs

Opioids and Morphine Derivates

Codeine

Heroin – ***Gear, Smack***, *Horse,*

Methadone – *Buzz Bomb, Junk*

Buprenorphine (Subutex or Suboxone) - *Buke*

Morphine

Opium

Commonly abused drugs

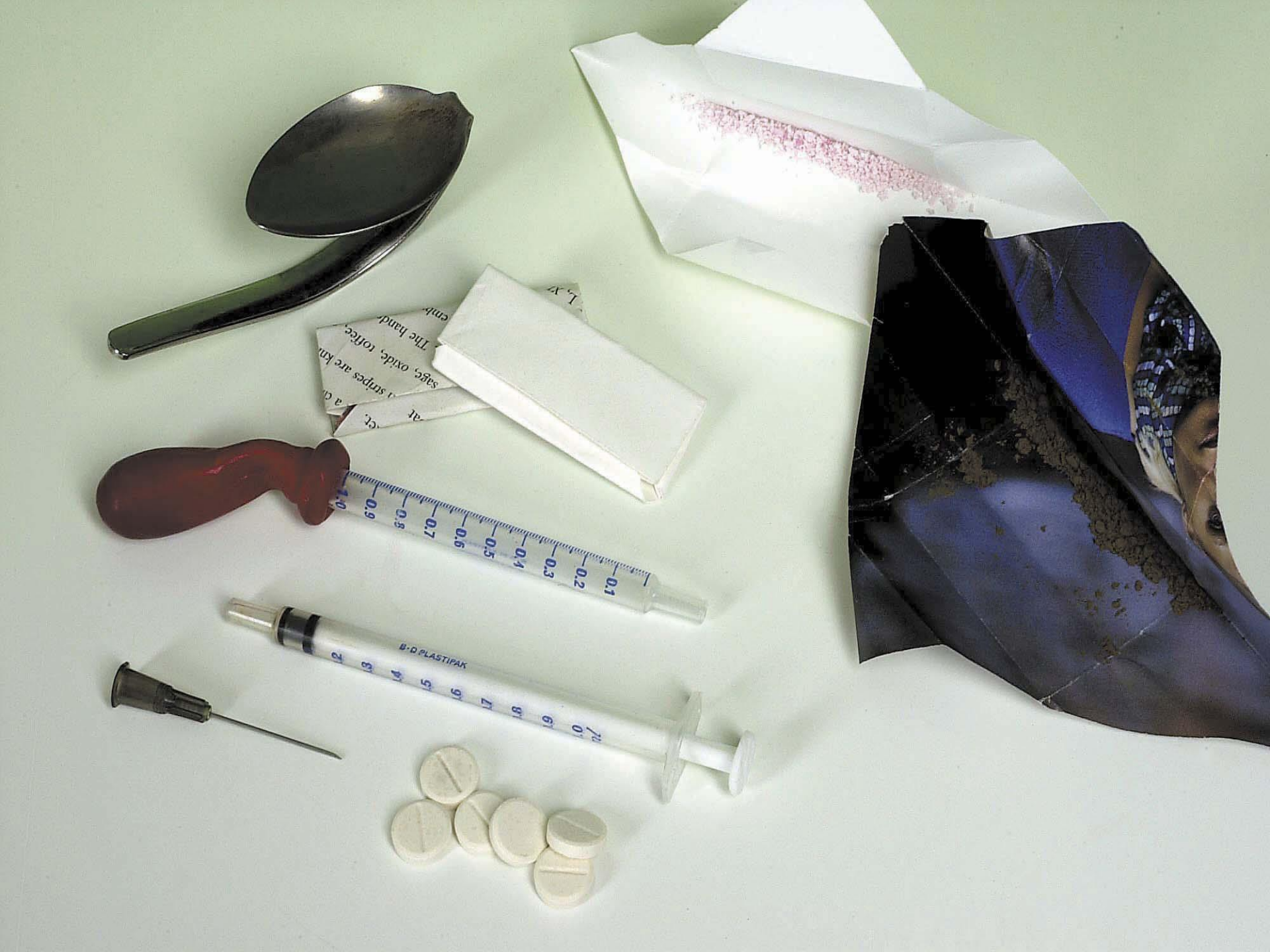
Depressants

Alcohol – ***Booze***

Barbiturates – *Barbs, Block Busters*

Benzodiazepines (Xanax, Rivotril)– *Benzo*

Methaqualone – *Disco Biscuits*


B-D PLASTIPAK

The Self-Medicated Patient: Recreational Drug Use and Addiction

1. *Alcohol:* Liver damage may impair ability to metabolize any administered drug. During withdrawal, shortacting benzodiazepines may reduce risk of seizures. Chlorpromazine which can cause seizures and hypotension should be avoided. Haloperidol is the safest agent to control agitation and psychotic symptoms.
2. *Marijuana:* Detoxification is not required; chronic
users may be depressed and require antidepressants.

The Self-Medicated Patient: Recreational Drug Use and Addiction

3. *Hallucinogens:* LSD is rapidly increasing in frequency of use, "bad trips" may require lorazepam and infrequently haloperidol. PCP is widely used; adverse reactions are best treated with haloperidol. Chlorpromazine and thioridazine, which can worsen autonomic "effects, should be avoided. Prolonged effects of PCP may require several months of haloperidol maintenance. Chlorpromazine can increase risk of seizures, and diazepam may provoke dangerous impulsive behavior. Street purchases of THC, LSD, and mescaline often contain PCP.
4. *Amphetamines:* Users may be paranoid and require haloperidol. Detoxification is not required; depression, which can be severe and require pharmacotherapy, commonly occurs during withdrawal from amphetamines and similar drugs.

The Self-Medicated Patient: Recreational Drug Use and Addiction

5. *Cocaine* has similar effects to amphetamines and related compounds; depression is common during withdrawal; detoxification is not required.
6. *Anticholinergics:* Physostigmine, by slow IV injection, is useful to confirm diagnosis. Avoid medicating patients with anticholinergic drugs; sedation with small doses of lorazepam may be required.

Pharmacologic treatments

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Narcotics (opiates and synthetics)

Detoxification using methadone or clonidine reduces discomfort of drug discontinuation. Abrupt discontinuation produces an unpleasant flulike syndrome but is not dangerous.
Estimate methadone dosage schedule by evaluation of response to methadone 5 to 10 mg administered orally, observing change in pupil size, postural blood pressure change, autonomic signs, and other withdrawal symptoms.

Sedatives (barbiturates, benzodiazepines, miscellaneous CNS depressants)

Abrupt withdrawal can be fatal due to status epilepticus, hyperthermia, and disseminated intravascular coagulation, if large doses have been used over a prolonged period of time. Do not rely on history for determination of detoxification dosage. Patients must have a pentobarbital tolerance test to determine severity of addiction and dose schedule for detoxification from barbiturates, benzodiazepines, or other CNS depressants. Detoxification employs gradually diminishing dosage of phenobarbital based on pentobarbital tolerance test (30 mg phenobarbital is equivalent to 100 mg pentobarbital).

Sedatives (barbiturates, benzodiazepines, miscellaneous CNS depressants)

Major withdrawal symptoms tend to occur five to seven days after barbiturate discontinuation, and may occur ten to 21 days after stopping long-acting benzodiazepines. Tissue and blood content of drug at:
time of tolerance test may yield spurious test result. Long-term use of low doses of sedatives may produce discomfort when drug use is stopped; patients require careful observation; they may not require detoxification.

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