

CHAPTER 8

Substance Abuse

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Substance Abuse: Leads to Dependence

- Physical dependence
- Psychologic dependence

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Commonly Abused Substances

- Opioids
- Stimulants
- Depressants
- Alcohol
- Nicotine

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BOX 8-1

Drug Categories for Substance Abuse

Major Categories

- Opioids
- Stimulants
- Depressants

Individual Agents

- Alcohol
- Nicotine

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Box 8-1 Drug categories for substance abuse

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Opioids

- Opium
- Heroin (diacetylmorphine)
- Codeine
- Hydromorphone
- Meperidine
- Morphine
- Oxycodone
- Propoxyphene

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Opioids (cont'd)

- Also known as narcotics
- Opium and heroin are Schedule I agents
- Most are Schedule II because of their high potential for abuse
- Often abused because of their ability to produce euphoria

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Opioids (cont'd)

- Produce
 - Analgesia, drowsiness, euphoria, tranquility, other alterations of mood
- Affect areas outside the CNS
 - Skin, GI tract, GU tract
- Normally used to:
 - Relieve pain, reduce cough, relieve diarrhea, and induce anesthesia

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Opioids (cont'd)

- Heroin
 - Injected (“mainlining” or “skin-popping”)
 - Sniffed (“snorted”)
 - Smoked
- Causes a brief “rush,” followed by a few hours of a relaxed, contented state

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Opioid Drug Withdrawal

- Peak period: 1 to 3 days
- Duration: 5 to 7 days
- Signs
 - Drug seeking, mydriasis, diaphoresis, rhinorrhea, lacrimation, diarrhea, elevated BP and pulse
- Symptoms
 - Intense desire for drugs, muscle cramps, arthralgia, anxiety, nausea, vomiting, malaise

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Opioid Drug Withdrawal (cont'd)

- Medications, such as opioid antagonists, may be used
- Must be free from opioids for 1 week
- These agents block opioid receptors so that euphoria is not produced
- Must have concurrent counseling as part of therapy

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Opioid Drug Withdrawal (cont'd)

- Other medications used for treatment
 - clonidine (Catapres) substitution
 - methadone substitution

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Stimulants

- Amphetamines
- Cocaine
- methylphenidate (Ritalin)

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Stimulants (cont'd)

- Effects that lead to abuse
 - Elevation of mood
 - Reduction of fatigue
 - Sense of increased alertness
 - “Invigorating alertness”
- Can lead to physical and psychologic dependence

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Methamphetamine

- Stronger effects than other amphetamines
- Pill form
- Powder form: snorted or injected
- Crystallized form:
 - “Ice,” “crystal,” “glass”
 - Smokable
 - More powerful

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Other Amphetamines

- methylenedioxyamphetamine
 - MDA, the “love drug”
- methylenedioxymethamphetamine
 - MDMA, “ecstasy”

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Cocaine

- From the leaves of the coca plant
- Snorted or injected intravenously
- Highly addictive—physical and psychologic dependence
- Powdered form
 - Dust, coke, snow, flake, blow, girl
- Crystallized form (smoked)
 - Crack, freebase rocks, rocks

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Stimulant Withdrawal: Signs and Symptoms

- Peak period: 1 to 3 days
- Duration: 5 to 7 days
- Signs
 - Social withdrawal, psychomotor retardation, hypersomnia, hyperphagia
- Symptoms
 - Depression, suicidal thoughts and behavior, paranoid delusions

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Stimulant Overdose

- Death results from:
 - Convulsions
 - Coma
 - Cerebral hemorrhage
- May occur during periods of intoxication or withdrawal

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Depressants

- Drugs that relieve anxiety, irritability, and tension
- Benzodiazepines and barbiturates
- flunitrazepam (Rohypnol)
 - “Roofies”
 - “Date rape drug”
 - Used to enhance a heroin high or to ease the coming down from a cocaine high

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Depressant Withdrawal: Signs and Symptoms

- Peak period
 - Short-acting agents: 2 to 4 days
 - Long-acting agents: 4 to 7 days
- Duration
 - Short-acting agents: 4 to 7 days
 - Long-acting agents: 7 to 12 days

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Depressant Withdrawal: Signs and Symptoms (cont'd)

- Signs
 - Increased psychomotor activity; agitation; muscular weakness; diaphoresis; delirium; convulsions; elevated BP, pulse, and temperature; tremors
- Symptoms
 - Anxiety, depression, euphoria, incoherence, hostility, disorientation, hallucinations, suicidal thoughts

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Depressant Overdose

- Mixing benzodiazepines with ethanol or barbiturates can be lethal
- Death results from respiratory arrest
- flumazenil (Romazicon) may be used to reverse the acute sedative effects of benzodiazepines

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Alcohol

- More accurately known as ethanol (ETOH)
- Causes CNS depression
- Few legitimate uses of ethanol and alcoholic beverages
- Ethanol is used as a solvent for many drugs

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Ethanol: Drug Effects

- CNS depression
- Respiratory stimulation or depression
- Vasodilation, producing warm, flushed skin
- Diuretic effects

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Effects of Chronic Ethanol Ingestion

- Nutritional and vitamin deficiencies (especially B vitamins)
 - Wernicke's encephalopathy
 - Korsakoff's psychosis
 - Polyneuritis
 - Nicotinic acid deficiency
- Seizures
- Alcoholic hepatitis, progressing to cirrhosis

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Effects of Chronic Ethanol Ingestion (cont'd)

- Fetal alcohol syndrome (FAS)
 - Craniofacial abnormalities
 - CNS dysfunction
 - Pre- and postnatal growth retardation

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Ethanol Withdrawal

- Mild withdrawal
 - Systolic BP >150 mm Hg
 - Diastolic blood pressure >90 mm Hg
 - Pulse >110 beats/minute
 - Temperature >100° F
 - Insomnia
 - Tremors
 - Agitation

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Ethanol Withdrawal (cont'd)

- Moderate withdrawal
 - Systolic BP 150 to 200 mm Hg
 - Diastolic BP 100 to 140 mm Hg
 - Pulse 110 to 140 beats/minute
 - Temperature 100° to 101° F
 - Tremors
 - Insomnia
 - Agitation

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Ethanol Withdrawal (cont'd)

- Severe withdrawal (delirium tremens)
 - Systolic BP >200 mm Hg
 - Diastolic blood pressure >140 mm Hg
 - Pulse >140 beats/minute
 - Temperature >101° F
 - Insomnia
 - Tremors
 - Agitation

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Ethanol Withdrawal Treatment

- diazepam (Valium) or lorazepam (Ativan)
 - Dosage and frequency depend on severity
- For severe withdrawal, monitoring in an intensive care unit is recommended
- disulfiram (Antabuse)
- Counseling
 - Individual
 - Alcoholics Anonymous

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Nicotine

- Many smoke to “calm nerves”
- Releases epinephrine that creates physiologic stress rather than relaxation
- Tolerance develops
- Physical and psychologic dependency
- Withdrawal symptoms occur if stopped
- No therapeutic uses

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Nicotine: Drug Effects

- Transient stimulation of autonomic ganglia
- Followed by more persistent depression of all autonomic ganglia
- CNS and respiratory stimulation, followed by CNS depression
- Increased heart rate and BP
- Increased bowel activity

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Nicotine Withdrawal

- Manifested by cigarette craving
 - Irritability, restlessness, decreased heart rate and BP
- Cardiac symptoms resolve in 3 to 4 weeks, but craving may persist for months or years

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Nicotine Withdrawal (cont'd)

- Transdermal patch and nicotine gum systems available
- bupropion (Zyban) may be prescribed to aid in smoking cessation

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Nursing Implications

- Assessments should include questions about substance abuse
- Be observant for clues to substance abuse so as to avoid withdrawal symptoms (especially delirium tremens)
- Establish therapeutic rapport and use empathy toward the patient

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Nursing Implications

- Provide monitoring and support as needed throughout the withdrawal process
- Educate the patient and family members or significant others about the recovery process
- Emphasize that recovery is lifelong

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