

CNS Medications

HSCC 371 General
Pharmacological Principles

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Narcotic Analgesics

- Analgesia = Pain Relief
- Common properties
 - agonists at opiate receptors
 - respiratory depression
 - interact with other CNS depressants
 - tolerance

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Morphine

- Prototype narcotic analgesic
- Tolerance/Dependence
 - Schedule II
 - high potential for abuse
- Withdrawal
 - very distressing
 - not usually fatal
- Overdose
 - treat with Narcan

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NSAIDS

- Many agents available
 - differ by half-life and duration
- Chemical families

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Sedatives, Hypnotics, and Anti-Anxiety Agents

- Barbiturates in the past
- Benzodiazepines used widely

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Barbiturates

- Same pharmacological effects
- Exhibit dose-dependent CNS depression
- Classified by lipid solubility and chemical structure

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Phenobarbital

- See handout
- Tolerance and Physical Dependence
 - Schedule II
 - tolerance due to enzyme induction and adaptation of CNS
- Withdrawal
 - mild: insomnia, anxiety
 - severe: fever, delirium, status epilepticus, death

Benzodiazepines

- Vary with respect to onset and duration
- Diazepam is the prototype

Valium

- See handout
- Tolerance, Dependence, Abuse
 - physical dependence with abrupt d/c
- Overdose
 - relatively safe if taken alone
 - often fatal in combination

Ativan

- See handout

Flumazenil

- Benzodiazepine reversal
- Useful in overdose
- Avoid in TCA/benzo combination

Versed

- See handout

Anti-Psychotics

- Psychosis
 - impaired ability to recognize reality
 - schizophrenia
 - mania
 - organic brain syndrome
- Tranquilizers or Neuroleptics

Haldol

- See handout

Anti-Convulsants

- Epilepsy
 - episodes of abnormal electrical activity in the brain
 - causes
 - idiopathic, cancer, stroke, brain injury, meningitis, acute alcohol ingestion
 - drug choice based on seizure type

Anti-Convulsants

- Epilepsy
 - agents suppress start of seizures
 - drug classes
 - hydantoins
 - long acting barbiturates
 - benzodiazepines
 - therapeutic goals
 - seizure free and functional

Hydantoins

- Dilantin is prototype
- See handout