MOA of Alcohol

- Multiple; Not well understood
- GABA receptor agonist
- NMDA (*glutamate*) receptor antagonist
- Believed to have either a direct or indirect effect on the mu-opioid receptor (*associated with alcohol cravings and euphoria; reward pathway*)

- *GABA is an inhibitor NT*
- *Glutamate is an excitatory NT*

Alcohol | Signs and Symptoms of Intoxication

Slurred speech

Loss of coordination

Unsteady gait (staggering)

Nystagmus (rapid, involuntary eye movement)

Impaired memory or attention

Stupor or coma

Can be mistaken for sedative intoxication ⇨ If the patient is conscious, ask them what they took

Signs & Symptoms of Alcohol Withdrawal

Sweating or HR > 100 BPM

⬆ hand tremor

Insomnia

Nausea ± Vomiting

Transient visual, tactile, or auditory hallucinations

Psychomotor agitation

Anxiety

Tonic-Clonic Seizures

Tonic-Clonic Seizure: a seizure that involves a loss of consciousness and violent muscle contractions

PK of Alcohol

Absorption	Small intestine
	Delayed gastric emptying and/or presence of food delays absorption
Metabolism	Zero-Order
	Metabolized by alcohol dehydrogenase
Elimination	Mostly into CO2 and water

Treatment of Alcohol Intoxication

ED visit, hospitalization, ICU admissions

Supportive care based on symptoms and BAC

ABC's [Airway, Breathing, Circulation]

Manage nausea and vomiting

Prevent aspiration

Replace fluids (ie banana bags)

Banana bags: Thiamine 100 mg, Folic Acid 1 mg, Multivitamin, ± magnesium

Clinical Presentation of Alcohol Withdrawal

6 to 12 hours	Minor Withdrawal
12 to 24 hours	Alcohol Hallucinosis
24 to 48 hours	Withdrawal Seizures
72 to 96 hours	Delirium Tremens (DT)

- *Onset is measured based on the time of the patient's last drink*
- *Could be sooner in more severe cases*

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Alcohol Withdrawal Presentations Defined	
Minor Withdrawal	Peaks at 24 to 36 hours
	May last up to 5 days
	Presence of 2 to 3 symptoms of withdrawal
	Tremors, anxiety, headache, diaphoresis, palpitations, nausea
Severe Withdrawal	Presence of ≥ 6 symptoms
	Alcoholic hallucinosis (visual is most common; auditory or tactile); generally resolves within 48 hours
	Seizures (generalized, tonic-clonic; can happen within hours of last drink)
Delirium Tremens (DTs)	Delirium, Disorientation, agitation, mydriasis, tachyc-ardia, HTN, Temp > 104F, diaphoresis
	Onset: 2 to 5 days after last drink
	Prevalence: 3 to 5% of pt's with untreated alcohol withdrawal
	Mortality rate: 5 to 15%

Risk Factors of Withdrawal
• Environmental: increased frequency of quantity of consumption, prior withdrawals, concomitant sedative, hypnotic, or anxiolytic drugs
• Genetic: family history of withdrawal

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