🧠 "Psychiatry for USMLE" 🧠

<- Section 1: Psychology ->

Learning Theories

1. Classical Conditioning (Pavlovian Conditioning) 🔔🐕

Definition

A type of learning in which a neutral stimulus, after being paired repeatedly with an unconditioned stimulus, comes to elicit an involuntary response.

Key Features

- Deals with involuntary / reflexive responses
- Learning occurs by association
- Response happens automatically, without conscious control

Classic Example (Pavlov)

- Food → salivation (unconditioned stimulus → unconditioned response)
- Bell + food → salivation
- Bell alone → salivation (conditioned response)

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> Classical conditioning is commonly tested in phobias, PTSD, and conditioned fear responses.

Flowchart (Classical Conditioning)

Neutral stimulus (bell)

↓ paired repeatedly with

Unconditioned stimulus (food)

↓

Conditioned stimulus (bell alone)

↓

Involuntary conditioned response (salivation)

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2. Operant Conditioning (Skinner) 🐀📦

Definition

Learning in which behavior is shaped by consequences — rewards or punishments.

Key Features

- Involves voluntary behaviors
- Behavior is influenced by what follows the action
- Central to behavior modification

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> Operant conditioning is heavily tested in psychiatric therapy models, addiction, and behavior reinforcement questions.

Reinforcement vs Punishment

Reinforcement

- Increases the likelihood of a behavior
- Can be positive or negative

Punishment

- Decreases the likelihood of a behavior
- Can be positive or negative

Skinner's Operant Conditioning Quadrants (High-Yield Table)

Behaviour	Add Stimulus	Remove Stimulus
Increase behavior	Positive reinforcement	Negative reinforcement
Decrease behavior	Positive punishment	Negative punishment

Quadrant Explained with Examples 🧩

Positive Reinforcement

- Add something desirable to increase behavior
- Example: Giving praise for good performance

Negative Reinforcement

- Remove something unpleasant to increase behavior

- Example: Taking painkillers to relieve pain

Positive Punishment

- Add something unpleasant to decrease behavior
- Example: Yelling at a child for misbehavior

Negative Punishment

- Remove something desirable to decrease behavior
- Example: Taking away phone privileges

Punishment (Concept Summary)

Repeated application of:

- Aversive stimulus (positive punishment), or
- Removal of desired reward (negative punishment) to extinguish unwanted behavior.

⚠️ USMLE Tip: Punishment suppresses behavior but does not teach an alternative behavior, unlike reinforcement.

Extinction 🧯

Definition

Discontinuation of reinforcement (positive or negative) that eventually leads to elimination of behavior.

Important Points

- Occurs in both classical and operant conditioning
- Behavior may briefly increase initially (extinction burst)

Example

- Ignoring tantrums → tantrums gradually stop

Transference & Countertransference 🔄

Transference

Definition

Patient projects feelings about important figures from their past onto the physician.

Example

- Psychiatrist is perceived as a parental figure

Countertransference

Definition

Physician projects their own unconscious feelings onto the patient.

Example

- Patient reminds doctor of a younger sibling

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> Transference is expected and can be therapeutically useful.
> Countertransference should be recognized and managed.

Ego Defense Mechanisms 🛡️

- Split into

1. Mature
2. Immature

Definition

Unconscious (or conscious) thoughts and behaviors used to:

- Reduce anxiety
- Resolve emotional conflict
- Protect self-esteem

Immature Defense Mechanisms (High-Yield for Step 1)

Key Point

> Immature defenses are commonly seen in children, adolescents, and certain psychiatric disorders.

Immature Defenses Table

Defense	Description	Exam Example

Acting out	Expressing unconscious emotional conflict through actions rather than reflection	Patient skips therapy after painful emotional discussions
Denial	Refusal to accept reality despite evidence	Cancer patient plans full-time work despite chemotherapy fatigue
Displacement	Redirecting emotions to a safer substitute target	Teacher scolds spouse after being reprimanded by principal
Dissociation	Temporary detachment from reality to avoid emotional stress	Trauma survivor becomes numb and detached when seeing abuser

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Dissociation — Extra USMLE Clarity ⭐

- Can involve:
  - Memory loss
  - Altered consciousness
  - Emotional numbing
- Common in acute stress disorder, PTSD, and trauma survivors

Flowchart (Dissociation)

Severe emotional stress

↓

Psychological overload

↓

Detachment from reality

↓

Memory gaps / numbness / altered awareness

Immature Defenses Table

Defense	Description	Classic USMLE Example
Fixation	Persistent focus at an earlier developmental stage (vs regression, which is a return)	College student continues thumb-sucking during exams
Idealization	Exaggerated positive evaluation of others while ignoring flaws	Patient praises physician excessively, denies any shortcomings

Identification	Unconscious adoption of traits or behaviors of another person or group	Resident copies attending's stethoscope habits
Intellectualization	Using logic and facts to avoid emotional distress	Cancer patient discusses disease pathophysiology calmly
Isolation of affect	Separation of emotion from content or memory	Describes murder details without emotional response
Passive aggression	Indirect expression of hostility	Employee repeatedly arrives late but denies resentment
Projection	Attributing one's own unacceptable thoughts to others	Man wanting to cheat accuses spouse of infidelity
Rationalization	Creating acceptable explanations to justify behavior	Fired employee claims the job was unimportant
Reaction formation	Expressing feelings opposite to true emotions (vs sublimation)	Stepfather overly nurtures a child he resents

Regression	Reverting to earlier behaviors under stress (vs fixation)	Toilet-trained child resumes bedwetting after sibling's birth
Repression	Unconscious blocking of distressing memories (vs suppression)	Adult cannot recall childhood counseling
Splitting	Viewing others as all good or all bad; intolerance of ambiguity	Patient idealizes doctors, devalues nurses

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Splitting — USMLE Favorite ⭐

- Strongly associated with Borderline Personality Disorder
- Mnemonic: "Borders split countries" 🌍

Flowchart (Splitting)

Emotional stress

↓

Inability to tolerate ambiguity

↓

People viewed as entirely good or entirely bad

↓

Rapid shifts in perception

Comparisons (Exam Traps 🚨)

Fixation vs Regression

- Fixation → staying at an earlier stage
- Regression → returning to an earlier stage after reaching maturity

Projection vs Displacement

- Projection → attribute impulse to someone else
- Displacement → redirect impulse to a safer target

Repression vs Suppression

- Repression → unconscious
- Suppression → conscious & intentional

Mature Defense Mechanisms 🌱

- Healthy, adaptive mechanisms
- Seen in psychologically well-adjusted adults
- Rarely pathological

Mnemonic: SASH 🧣

Sublimation

Altruism

Suppression

Humor

Mature Defenses Table

Defense	Description	USMLE Example
Sublimation	Channeling unacceptable impulses into socially acceptable actions (vs reaction formation)	Aggression redirected into sports excellence
Altruism	Helping others to relieve internal distress	Mafia boss donates to charity

Suppression	Conscious, temporary avoidance of distressing thoughts (vs repression)	Athlete focuses on training instead of worrying
Humor	Using jokes to cope with discomfort	Nervous medical student jokes about boards

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Sublimation — Extra Exam Pearl ⭐

- Only defense mechanism that is both mature AND socially productive
- Often the best answer choice when presented

Flowchart (Sublimation)

Unacceptable impulse

↓

Conscious or unconscious redirection

↓

Socially acceptable behavior

↓

Reduced anxiety + functional outcome

One-Glance Summary 🧠

- Immature defenses → maladaptive
- Mature defenses → healthy coping, SASH mnemonic

Grief 🕊️

Definition

Grief is a normal, natural emotional response to the death of a loved one.

Key Characteristics

- Symptoms and course vary between individuals
- No fixed sequence of stages
- Specific to:
  - The individual
  - The nature of the loss
  - Cultural and religious context

Common Symptoms of Grief

- Sadness, guilt, yearning
- Somatic complaints (fatigue, pain)
- Hallucinations of the deceased (normal in grief 👀)
- Transient thoughts of:
  - "I wish I had died with them"
  - "Life is not worth living without them"

⚠️ USMLE Pearl

Passive death wishes can be normal in grief if no intent or plan is present.

Acute (Normal) Grief

- Time-limited
- Gradual adaptation within ~6 months
- Not a psychiatric disorder
- Does not significantly impair long-term functioning

Prolonged Grief Disorder (Pathologic Grief)

Diagnosis

- Intense grief lasting ≥ 6–12 months
- Significant functional impairment
- Inconsistent with cultural or religious norms
- Does NOT meet criteria for another disorder (e.g., MDD)

Key Differentiation

- In grief → mood improves with reminders of deceased
- In MDD → pervasive low mood, anhedonia

-> Flowchart: Grief Evaluation

Loss of loved one

↓

Assess duration & severity

↓

< 6 months + gradual adaptation → Normal grief

↓

≥ 6–12 months + functional impairment

↓

Exclude MDD

↓

Prolonged grief disorder

Normal Infant & Child Development 👶🧒

Milestone ages are ranges, not exact dates

Failure to meet milestones → evaluate for developmental delay

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Infant (0–12 months)

Mnemonic for reflexes: *Mr. Peanut Butter* 🥜

(Moro, Rooting, Palmar grasp, Babinski)

Motor

- Head lifting (by 1 mo)
- Rolls & sits (by 6 mo)
- Crawls (by 8 mo)
- Stands (by 10 mo)
- Walks (12–18 mo)

Fine Motor

- Transfers objects hand-to-hand (by 6 mo)
- Pincer grasp (by 10 mo)
- Points to objects (by 12 mo)

Social

- Social smile (by 2 mo)
- Stranger anxiety (by 6 mo)
- Separation anxiety (by 9 mo)

Verbal / Cognitive

- Orients to voice (by 4 mo)
- Responds to name/gestures (by 9 mo)
- Object permanence (by 9 mo)
- "Mama/Dada" (by 10 mo)

Toddler (12–36 months)

Motor

- First steps (by 12 mo)
- Climbs stairs (by 18 mo)
- Kicks ball (by 24 mo)
- Stacks cubes = age × 3

Self-care

- Feeds self with fork/spoon (by 20 mo)

Social

- Parallel play (24–36 mo)
- Rapprochement (moves away then returns to parent)
- Core gender identity formed (by 36 mo)

Language

- 50–200 words (by 2 yr)
- 300+ words (by 3 yr)

Preschool (3–5 years) 🎨

Motor

- Tricycle (3 wheels at 3 yr 🚲)
- Hops on one foot by 4 yr ("4 on one foot")
- Buttons/zippers & grooming (by 5 yr)

Social

- Comfortable away from parents (by 3 yr)
- Cooperative play
- Imaginary friends (by 4 yr)

Language / Cognition

- Understands ~1000 words (3 zeros) by 3 yr
- Full sentences + prepositions (by 4 yr)
- Tells detailed stories (by 4 yr)

<- Section 2: Pathology ⚠️ ->

Child Abuse

🚨 ALL suspected cases MUST be reported → Child Protective Services

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Types of Child Abuse

Type	Key Signs	Epidemiology
Neglect	Poor hygiene, malnutrition, withdrawal, failure to thrive	Most common form
Physical abuse	Non-accidental injuries, multiple healing stages, patterned bruises, burns	40% of deaths occur in children < 1 yr
Sexual abuse	STIs, UTIs, genital/anal/oral trauma; often no physical signs	Peak age 9–12 yr
Emotional abuse	Poor bonding, aggression, anxiety, somatic symptoms	~80% develop ≥1 psychiatric illness

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Physical Abuse — USMLE Red Flags 🚩

- Inconsistent history
- Delay in seeking care
- Injuries not compatible with developmental stage
- Shaken baby syndrome:
    - Subdural hematomas
    - Retinal hemorrhages

Sexual Abuse — Exam Pearl ⭐

> Absence of physical findings does NOT rule out sexual abuse

- Behavioral clues often more important than physical signs
- Sexualized behavior inappropriate for age

Emotional Abuse — Long-Term Impact

- Emotional lability
- Anger outbursts

- Social withdrawal
- Vague, unexplained somatic complaints

Vulnerable Child Syndrome 🧩

Definition

Parents perceive child as unusually fragile or ill →
WITHOUT intentional fabrication

Key Points

- Often follows serious illness or near-death event
- Leads to:
  - Excessive medical visits
  - Missed school
  - Overprotection

Important Distinction

- Not Factitious Disorder Imposed on Another
- No deliberate falsification

Flowchart: Vulnerable Child Syndrome

Child experiences serious illness

↓

Parental anxiety persists

↓

Perception of child as fragile

↓

Excessive healthcare use / school absence

USMLE Takeaways ✨

- Grief ≠ depression unless criteria met
- Developmental milestones = ranges
- Always report suspected child abuse
- Absence of physical findings ≠ absence of abuse
- Vulnerable child syndrome is unintentional

Childhood & Early-Onset Disorders 👶

Attention-Deficit/Hyperactivity Disorder (ADHD)

⚡

Onset: Symptoms before age 12 (diagnosis reliably after age ≥4)

Core features:

- Inattention, hyperactivity, and/or impulsivity
- Present in ≥2 settings (school, home, places of worship, etc.)

Key Points

- Normal intelligence
- Often persists into adulthood
- Frequently comorbid with learning and behavioral disorders

Treatment

- First line: Stimulants (e.g., methylphenidate)
- ± Behavioral therapy

- Alternatives: Atomoxetine, α2-agonists (clonidine, guanfacine)

Flowchart (ADHD Diagnosis)

Symptoms before 12

↓

Present in ≥2 settings

↓

Functional impairment

↓

Exclude other causes

↓

ADHD

Autism Spectrum Disorder (ASD) 🧩

Onset: Early childhood

Core features:

- Social & communication deficits

- Restricted interests
- Repetitive/ritualized behaviors

Associations

- Male predominance
- Intellectual disability or isolated superior skills (e.g., music)
- ↑ head/brain size

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> ASD ≠ language delay alone; social reciprocity deficit is key.

Conduct Disorder 🚨

Definition: Persistent violation of societal norms/rights of others

Examples: Aggression, property destruction, theft

Important Distinction

- Children: Conduct disorder
- Adults (≥18): Antisocial personality disorder

Treatment: Psychotherapy (e.g., CBT)

Disruptive Mood Dysregulation Disorder (DMDD) 😠

Onset: Before age 10

Features:

- Severe, recurrent temper outbursts
- Persistent irritability between outbursts

Treatment: CBT, stimulants, antipsychotics

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> DMDD helps prevent overdiagnosis of pediatric bipolar disorder.

Intellectual Disability 🧠

Definition: Global cognitive deficits (vs specific learning disorder)

Impairments

- Reasoning, memory, abstract thinking
- Adaptive functioning (education, employment, independence)

Treatment:

Psychotherapy, occupational therapy, special education

Intermittent Explosive Disorder 💥

Onset: After age 6

Features

- Sudden verbal/physical aggression
- Outbursts < 30 minutes
- Out of proportion to provocation
- Not premeditated
- Relief → remorse

Treatment: Psychotherapy, SSRIs

Oppositional Defiant Disorder (ODD) 🤦

Definition: ≥6 months of:

- Anger/irritability
- Argumentative, defiant, vindictive behavior

Target: Authority figures

Treatment: Psychotherapy (CBT)

Selective Mutism 🤐

Onset: Before age 5

Definition: Failure to speak in specific settings despite speaking elsewhere

Key Points

- Anxiety disorder

- Normal speech/language development
- Often comorbid with social anxiety disorder

Treatment: Behavioral, family & play therapy; SSRIs

Separation Anxiety Disorder 🏠

Definition: Excessive fear of separation for ≥4 weeks

Notes

- Normal up to age 3–4
- May present with factitious physical complaints to avoid school

Treatment: CBT, play therapy, family therapy

Specific Learning Disorder 📚

Onset: School age

Definition: Difficulty in a specific domain (reading, writing, math) for ≥6 months despite intervention

Key Distinction

- Normal intelligence
- Normal general functioning

Treatment: Academic support, counseling, extracurriculars

Tourette Syndrome 🗣️

Onset: Before age 18

Definition:

- Multiple motor tics and ≥1 vocal tic
- Duration > 1 year

Associations

- ADHD
- OCD
- Coprolalia (minority)

Treatment

- Psychoeducation, behavioral therapy

- Severe tics: tetrabenazine, antipsychotics, α 2-agonists

Orientation 🧭

Definition: Awareness of time, place, person

Order of loss:

Time → Place → Person

Common Causes

- Alcohol/drugs
- Electrolyte imbalance
- Head trauma
- Hypoglycemia
- Infection
- Nutritional deficiencies
- Hypoxia

Amnesias 🧠

Retrograde Amnesia

- Inability to recall events before CNS insult

Anterograde Amnesia

- Inability to form new memories after CNS insult
- Most commonly tested

Korsakoff Syndrome 🍺

Cause: Vitamin B1 (thiamine) deficiency

Features

- Anterograde > retrograde amnesia
- Disorientation
- Confabulations

Pathology

- Damage to mammillary bodies & anterior thalamus

- Late manifestation of Wernicke encephalopathy

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> Always give thiamine before glucose in alcohol use disorder.

Dissociative Disorders 🌫️

Depersonalization / Derealization Disorder

Features

- Detachment from self (depersonalization) or surroundings (derealization)
- Reality testing intact (vs psychosis)

Dissociative Amnesia

Definition

- Inability to recall personal information after trauma

May include

- Dissociative fugue: sudden travel away from home

Dissociative Identity Disorder 🎭

Definition

- ≥2 distinct identities with separate memories

Associations

- Childhood sexual abuse
- PTSD
- Depression
- Substance use
- Borderline personality disorder

Epidemiology

- More common in females

Delirium ⚠️

Definition

Acute, reversible disturbance of:

- Consciousness
- Attention
- Cognition

Core Features

- Waxing and waning course
- ↓ attention & arousal
- Disorganized thinking
- Visual hallucinations
- Sleep–wake cycle disturbance
- Agitation

Mnemonic: Delirium = Sensorium changes

Common Causes

- Infection
- Metabolic/electrolyte disturbances
- CNS disease or trauma
- Substance use or withdrawal
- Medications (anticholinergics, opioids, benzodiazepines)
- Urinary/fecal retention

Epidemiology

- Most common cause of altered mental status in hospitalized patients
- Especially ICU & elderly

Investigations

- EEG: Diffuse background slowing 📉

Management 🩺

Primary

- Identify & treat underlying cause

Supportive

- Orientation aids (clock, calendar)
- Normalize sleep
- Cognitive stimulation

Medications

- Haloperidol PRN for severe agitation

Avoid

- Unnecessary restraints
- Anticholinergics
- Benzodiazepines (unless withdrawal)

-> Flowchart (Delirium Approach)

Acute mental status change

↓

Fluctuating consciousness + ↓ attention

↓

Identify medical cause

↓

Treat underlying illness

↓

Supportive care ± antipsychotic

One-Look Exam Summary 🧠✨

- ADHD → stimulants
- ASD → social deficits + repetitive behaviors
- Conduct → antisocial disorder (adult) or conduct disorder (children)
- Tourette → motor + vocal tics >1 yr
- Korsakoff → B1 deficiency + confabulation
- Delirium → acute, fluctuating, reversible

Psychosis 🧠

Definition

Psychosis is a distorted perception of reality characterized by:

- Delusions
- Hallucinations
- Disorganized thought or speech

Causes

- Primary psychiatric illness (e.g., schizophrenia)
- Medical conditions (e.g., delirium, dementia)
- Substance or medication use

Delusions 💭

Definition

False, fixed, idiosyncratic beliefs that:

- Persist despite evidence to the contrary

- Are not consistent with the patient's culture or religion

Examples

- Thought broadcasting ("others can read my thoughts")

Types (USMLE-Relevant)

- Erotomanic – someone is in love with me
- Grandiose – special powers, wealth, identity
- Jealous – partner is unfaithful
- Persecutory – being targeted or harmed
- Somatic – false bodily dysfunction
- Mixed / unspecified

Disorganized Thought & Speech 🗣️

Forms

- Word salad – incoherent speech

- Tangential – never reaches the point
- Loose associations – ideas jump with weak connections

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Disorganized speech strongly suggests schizophrenia spectrum disorders.

Hallucinations 👁️👂

Definition

Perception without external stimulus

Types & Associations (HIGH-YIELD)

Type	Common Association
Auditory	Psychiatric illness (schizophrenia)
Visual	Neurologic disease, delirium, dementia, intoxication
Tactile	Alcohol withdrawal, stimulants ("cocaine crawlies")
Olfactory	Temporal lobe epilepsy, brain tumors (e.g., burning rubber)

Gustatory	Rare; epilepsy
Hypnagogic	Occurs while falling asleep (narcolepsy)
Hypnopompic	Occurs while waking up (narcolepsy)

Hallucinations vs Illusions ⚠️

- Hallucination → no external stimulus
- Illusion → misinterpretation of real stimulus
    - Example: mistaking a shadow for a black cat 🐈

Mood Disorders 🎭

Definition

Disorders characterized by:

- Abnormal mood states
- Loss of emotional regulation
- Functional impairment

Includes

- Major depressive disorder
- Bipolar disorder
- Dysthymic disorder
- Cyclothymic disorder

Psychotic Features

- Can occur during mood episodes
- Not during hypomania

Schizophrenia Spectrum Disorders 🧠⚠️

Schizophrenia

Definition

Chronic psychotic illness causing severe functional impairment

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Symptom Categories

Positive (Added behaviors) ➕

- Delusions
- Hallucinations
- Disorganized speech
- Bizarre behavior

Negative (Loss of function) ➖

- Flat/blunted affect
- Apathy
- Anhedonia
- Alogia
- Social withdrawal

Cognitive

- Impaired working memory
- Poor planning
- Inattention

Diagnostic Criteria (VERY HIGH-YIELD)

≥ 2 symptoms, with ≥1 from first 3, lasting:

- ≥1 month active symptoms
- ≥6 months total duration

Symptoms

1. Delusions
2. Hallucinations (often auditory)
3. Disorganized speech
4. Disorganized or catatonic behavior
5. Negative symptoms

Pathophysiology & Associations 🧪

- ↑ Dopamine activity
- ↑ Serotonin activity
- ↓ Dendritic branching
- Ventriculomegaly on imaging
- ↑ Suicide risk

Epidemiology

- Lifetime prevalence ~ 1.5%

- Males > females
- Earlier onset:
  - Males: late teens–early 20s
  - Females: late 20s–early 30s

Substance Association

- Heavy adolescent cannabis use → ↑ psychosis risk & severity

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Treatment

- First line: Atypical antipsychotics (e.g., risperidone)

⚠️ Negative symptoms often persist even after positive symptoms improve.

Flowchart: Psychotic Disorder Duration ⏳

Psychotic symptoms present

↓

1 day–1 month → Brief psychotic disorder

↓

1–6 months → Schizophreniform disorder

↓

≥6 months → Schizophrenia

Other Schizophrenia Spectrum Disorders

Brief Psychotic Disorder

- ≥1 positive symptom
- Duration 1 day–1 month
- Often stress-related

Schizophreniform Disorder

- ≥2 symptoms
- Duration 1–6 months

Schizoaffective Disorder

- Features of schizophrenia + mood disorder

Key Diagnostic Rule (EXAM FAVORITE ⭐)

≥ 2 weeks of psychosis WITHOUT mood symptoms

Delusional Disorder

- ≥1 delusion lasting >1 month
- No other psychotic symptoms
- Overall functioning largely intact
- May be shared (folie à deux)

Schizotypal Personality Disorder

- Cluster A personality disorder
- Odd beliefs, behavior, speech
- Brief, mild psychotic episodes

- Less severe than schizophrenia

Manic Episode 🔥

Definition

Distinct period of:

- Elevated, expansive, or irritable mood
- ↑ energy and activity

Duration

- ≥ 1 week
- Any duration if hospitalization required

Diagnostic Features — DIG FAST 🧠

- Distractibility
- Impulsivity / indiscretion
- Grandiosity

- Flight of ideas
- Activity ↑ / psychomotor agitation
- Sleep ↓ (decreased need)
- Talkativeness / pressured speech

Requires

- ≥3 symptoms
- Marked functional impairment

Flowchart: Mania vs Hypomania

Elevated or irritable mood

↓

Marked impairment or hospitalization?

↓

Yes → Mania

No → Hypomania

Final USMLE Rapid Review ⚡

- Auditory hallucinations → psychiatric
- Visual hallucinations → delirium/neurologic
- Schizophrenia → ≥6 months
- Schizoaffective → 2 weeks psychosis alone
- Mania → DIG FAST + impairment

🌤️ Hypomanic Episode

Definition:

Similar to mania but less severe

Key Features

- Elevated or irritable mood
- ↑ energy or activity ⚡
- No psychotic features
- No marked social/occupational impairment
- No hospitalization required
- Duration ≥ 4 consecutive days

📌 USMLE trap:

If hospitalization or psychosis → mania, not hypomania

🔁 Bipolar Disorders

Bipolar I Disorder

Requires:

- ≥ 1 manic episode
- ± hypomanic or depressive episodes

Bipolar II Disorder

Requires:

- ≥ 1 hypomanic episode
- ≥ 1 major depressive episode
- ❌ No manic episodes ever

📌 Mood usually returns to baseline between episodes

🧠 Key Clinical Pearls

- Antidepressants alone can destabilize mood ⚠️
- High suicide risk
- Patients may appear "normal" between episodes

💊 Treatment

- Mood stabilizers: lithium, valproate, carbamazepine, lamotrigine
- Atypical antipsychotics

🌊 Cyclothymic Disorder

Definition:

Chronic, milder bipolar-like disorder

Criteria

- Fluctuating hypomanic + mild depressive symptoms
- Duration ≥ 2 years
- Symptoms present ≥ 50% of the time

- Remission ≤ 2 months

📌 Think: *"emotional roller coaster, but never extreme"*

🌧️ Major Depressive Disorder (MDD)

Diagnostic Criteria

- ≥ 5 symptoms
- Duration ≥ 2 weeks
- Must include depressed mood OR anhedonia

🧠 SIG E CAPS (memorize!)

- Sleep disturbance
- ↓ Interest (anhedonia)
- Guilt / worthlessness
- ↓ Energy
- ↓ Concentration
- Appetite / weight change
- Psychomotor agitation or retardation
- Suicidal ideation

📌 Always screen for past mania/hypomania → rule out bipolar disorder

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💊 Treatment

- First line: CBT + SSRIs
- Alternatives: SNRIs, mirtazapine, bupropion
- Severe/refractory: ECT, ketamine

🧠 MDD With Psychotic Features

Definition

- MDD + hallucinations or delusions
- Psychosis is mood-congruent
    - Guilt, punishment, nihilism, disease, death

📌 Occurs ONLY during depressive episode (vs schizoaffective disorder)

Treatment

- Antidepressant + atypical antipsychotic
- ECT highly effective ⚡

⏳ Persistent Depressive Disorder (Dysthymia)

- Chronic, low-grade depression
- ≥ 2 depressive symptoms
- Duration ≥ 2 years (≥ 1 year in children)
- Remission ≤ 2 months

📌 Often described as "I've always felt this way"

❄️ MDD With Seasonal Pattern

- Depressive episodes in specific seasons (usually winter)
- Present ≥ 2 consecutive years
- Atypical features common

Treatment

- Standard MDD therapy
- + Light therapy 💡

🍰 Depression With Atypical Features

Features

- Mood reactivity 😊
- Hypersomnia
- Hyperphagia
- Leaden paralysis
- Rejection sensitivity

📌 Most common depression subtype

Treatment

- CBT + SSRIs (first line)
- MAOIs effective but not first line ⚠️

🤰 Peripartum Mood Disorders

Postpartum Blues

- 50–85%
- Onset: 2–3 days postpartum
- Tearfulness, fatigue
- Resolves ≤ 2 weeks
- Treatment: reassurance & support

MDD With Peripartum Onset

- 10–15%
- Meets full MDD criteria
- Onset during pregnancy or ≤ 4 weeks postpartum
- Treatment: CBT + SSRIs

🚨 Postpartum Psychosis

- 0.1–0.2% (psychiatric emergency)
- Delusions, hallucinations
- Thoughts of harming baby or self

Risk factors

- Bipolar disorder
- First pregnancy
- Family history
- Recent med change

Treatment

- Hospitalization
- Atypical antipsychotic
- ECT if severe or refractory

⚡ Electroconvulsive Therapy (ECT)

Indications

- Refractory depression
- Depression with psychosis
- Catatonia
- Acute suicidality

Mechanism

- Induces controlled tonic-clonic seizure under anesthesia

Adverse effects

- Headache
- Disorientation
- Temporary anterograde/retrograde amnesia (resolves ≤ 6 months)

📌 No absolute contraindications

📌 Safe in pregnancy and elderly

☠️ Suicide Risk Factors (Death)

Mnemonic: SAD PERSONS 🧠

- Sex (male)
- Age (young or elderly)
- Depression

- Previous attempt (⚠️ strongest predictor)
- Ethanol/drugs
- Rational thinking loss (psychosis)
- Sickness
- Organized plan
- No social support
- Stated future intent

📌 Women attempt more; men die more

📌 Firearms = most common method in the US

🛡️ Protective Factors

- Effective psychiatric care
- Strong family/community ties
- Religious or cultural beliefs
- Problem-solving skills

😰 Anxiety Disorders

Definition

- Excessive fear or worry disproportionate to stressors
- Includes panic disorder, phobias, GAD, selective mutism
- Not due to medical illness or substances

🚨 Panic Disorder

🔹 Core Features

- Recurrent, unexpected panic attacks
- Episodes of intense fear or discomfort
- May occur with or without a trigger
- Strong genetic component
- ↑ suicide risk

⏱️ Panic Attack Characteristics

- Abrupt onset

- Peaks within ~10 minutes
- Symptoms are systemic manifestations of fear

🧠 ≥ 4 of the following symptoms:

- Palpitations
- Chest pain
- Shortness of breath
- Choking sensation
- Sweating
- Shaking
- Chills
- Paresthesias
- Lightheadedness
- Abdominal distress or nausea
- Depersonalization or derealization
- Fear of dying
- Fear of losing control

📌 Exam pearl:

Chest pain + dyspnea + fear of dying + rapid peak → think panic attack, not MI.

📋 Diagnostic Criteria (Beyond the Attack)

Diagnosis requires ≥ 1 month after an attack of ≥ 1 of the following:

- Persistent concern about additional attacks
- Worry about consequences (eg, "I'm having a heart attack")
- Behavioral change related to attacks (avoidance)

💊 Treatment

- First line: CBT + SSRIs or venlafaxine
- Acute severe attacks: benzodiazepines (short term only)

⚠️ Avoid long-term benzos due to dependence.

😱 Phobias

🔹 Definition

- Severe, persistent fear of a specific object or situation
- Duration ≥ 6 months
- Patient usually recognizes fear is excessive

🧠 Types of Phobias

Type	Key Feature
Specific phobia	Fear of object/situation (eg, heights, animals)
Social anxiety disorder	Fear of embarrassment or scrutiny
Agoraphobia	Fear of being unable to escape or get help

💊 Treatment (All Phobias)

- CBT with exposure therapy = cornerstone 🎯

👫 Social Anxiety Disorder

🔹 Key Features

- Intense fear of social or performance situations
- Fear of embarrassment or negative evaluation
- Examples: public speaking, eating in public, using public restrooms

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💊 Treatment

- CBT
- SSRIs or SNRIs

📌 Performance-only subtype (eg, public speaking):

- β-blockers or benzodiazepines PRN

🚪 Agoraphobia

🔹 Definition

Fear or avoidance of ≥ 2 situations due to concern that escape or help may be unavailable

Common Situations

- Public transportation
- Open spaces
- Enclosed spaces
- Lines or crowds
- Being outside home alone

📌 Often associated with panic disorder

💊 Treatment

- CBT
- SSRIs

🧠 Generalized Anxiety Disorder (GAD)

🔹 Definition

- Excessive, uncontrollable worry
- About multiple aspects of daily life
- Occurs most days for ≥ 6 months

🧠 Associated Symptoms

Adults require ≥ 3 (children ≥ 1)

Mnemonic: CRIMES 🚔

- Concentration difficulty
- Restlessness
- Irritability
- Muscle tension
- Energy low (fatigue)
- Sleep disturbance

💊 Treatment

- First line: CBT, SSRIs, SNRIs
- Second line: buspirone, TCAs
- Third line: benzodiazepines (short term only)

📌 Exam tip:

GAD = chronic, diffuse worry

Panic disorder = episodic, intense fear

🔁 Obsessive-Compulsive & Related Disorders

🔄 Obsessive-Compulsive Disorder (OCD)

🔹 Core Components

- Obsessions: intrusive, distressing thoughts or urges
- Compulsions: repetitive behaviors to reduce distress

📌 Behaviors are time-consuming and impair function

📌 Poor insight = worse prognosis

🧠 Associations

- Tic disorders
- Anxiety disorders

💊 Treatment

- First line: CBT (exposure + response prevention) + SSRIs
- Second line: clomipramine, venlafaxine

🪞 Body Dysmorphic Disorder

🔹 Definition

- Preoccupation with imagined or minor physical defects
- Causes significant distress
- Repetitive behaviors (mirror checking, grooming)

📌 Common in eating disorders

💊 Treatment

- CBT

✂️ Trichotillomania

🔹 Definition

- Compulsive hair pulling
- Persistent despite attempts to stop
- Causes distress or impairment

🧠 Clinical Clue

- Patchy hair loss
- Remaining hairs of different lengths
  (vs alopecia areata → smooth bald patches)

💊 Treatment

- CBT
- SSRIs

🌪️ Trauma & Stressor-Related Disorders

⏳ Adjustment Disorder

🔹 Definition

- Emotional or behavioral symptoms
- Occur within 3 months of identifiable stressor
- Resolve < 6 months after stressor ends

📌 Does NOT meet criteria for another psychiatric disorder

🧠 Diagnostic Flow

Stressful life event

↓

Symptoms begin within 3 months

↓

Symptoms < 6 months after stressor ends

↓

No criteria met for MDD, GAD, PTSD

↓

➡️ Adjustment disorder

💊 Treatment

- CBT (first line)
- Antidepressants/anxiolytics if needed

🧠 Post-Traumatic Stress Disorder (PTSD)

🔹 Trigger

- Exposure to actual or threatened death, injury, or sexual violence

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🧠 Core Features

Mnemonic: HARD 💥

- Hyperarousal

- Avoidance
- Re-experiencing (flashbacks, nightmares)
- Distress / negative cognition or mood

⏱️ Duration

- > 1 month
- Causes functional impairment

💊 Treatment

- First line: CBT, SSRIs, venlafaxine
- Nightmares: prazosin 🌙

⏰ Acute Stress Disorder

🔹 Key Differences from PTSD

- Same symptom clusters
- Duration: 3 days – 1 month

💊 Treatment

- CBT
- Medications usually not indicated

📌 High-Yield Comparison Flowchart

Trauma exposure

↓

Symptoms < 1 month → Acute stress disorder

Symptoms > 1 month → PTSD

🧩 Personality Disorders

Definition:

- Inflexible, maladaptive, pervasive patterns of behavior
- Cause distress or impaired functioning
- Usually egosyntonic (patient unaware)

- Present by early adulthood

Clusters (easy mnemonics):

Cluster	Mnemonic	Core Features	Key Associations
A	Weird	Odd, eccentric, socially awkward	Genetic ↑ with schizophrenia
B	Wild	Dramatic, emotional, erratic	Genetic ↑ with mood disorders, substance use
C	Worried	Anxious, fearful	Genetic ↑ with anxiety disorders

Cluster A – Odd / Eccentric

Disorder	Key Features
Paranoid	Distrust, suspicious, accusatory, hypervigilant

Schizoid	Social withdrawal, solitary, limited emotions, indifferent
Schizotypal	Eccentric, magical thinking, interpersonal awkwardness, brief psychotic episodes possible

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Cluster B – Dramatic / Emotional / Erratic

Disorder	Key Features	Notes / Treatment
Antisocial	Disregard for others, lack of remorse, impulsive, manipulative	Must be ≥18y with CD <15y; M>F
Borderline	Unstable mood & relationships, fear of abandonment, self-harm, splitting	Females>males; Dialectical Behavior Therapy (DBT)
Histrionic	Attention-seeking, dramatic, shallow emotions, seductive	

Narcissistic	Grandiosity, entitlement, lack of empathy, fragile self-esteem	Reacts to criticism with rage; "must be best"

Cluster C – Anxious / Fearful

Disorder	Key Features
Avoidant	Hypersensitive to rejection, socially inhibited, desires relationships
Obsessive-Compulsive	Preoccupation with order, perfectionism, control; egosyntonic
Dependent	Clingy, submissive, low confidence, prone to abusive relationships

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🤔 Malingering vs Factitious vs Somatic Disorders

Feature	Malingering	Factitious	Somatic Symptom Disorders
Symptoms	Intentional	Intentional	Unconscious
Motivation	External (secondary gain: avoid work, compensation)	Internal (primary gain: sick role, attention)	None / unconscious
Compliance	Poor with treatment/tests	Often undergoes procedures	Regular visits, seeks reassurance

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Factitious Disorders

Type	Key Features	Notes
Imposed on self	Chronic, physical symptoms, multiple hospitalizations	Munchausen syndrome; more common in females & HCWs

Imposed on another	Illness created or fabricated in someone else	Munchausen by proxy; form of child/elder abuse

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Somatic Symptom & Related Disorders

Disorder	Key Features	Typical Demographics / Notes
Somatic Symptom Disorder	≥1 physical complaint (eg, pain, fatigue), persistent anxiety about symptoms	Chronic, may co-occur with medical illness; treatment = regular follow-up & reassurance
Conversion Disorder	Loss of sensory/motor function, la belle indifférence, often post-stressor	Females, adolescents, young adults
Illness Anxiety Disorder	Preoccupation with serious illness, minimal/no somatic symptoms	Excessive health-related anxiety

⚡ High-Yield Tips / Mnemonics

- Clusters:
  - A = Weird, B = Wild, C = Worried
- Factitious vs Malingering:
  - "FM S" → Factitious = Sick role (internal), Malingering = Money / gain (external), Somatic = Subconscious"
- Borderline hallmark: Splitting ("all good" vs "all bad")
- Conversion clue: la belle indifférence → patient indifferent to symptom severity

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🍽️ Eating Disorders

Disorder	Key Features	Typical Findings / Complications	Treatment

Anorexia Nervosa	Fear of weight gain, distorted body image, calorie restriction	BMI <18.5; bradycardia, hypotension, hypothermia, lanugo, amenorrhea, osteoporosis; refeeding syndrome risk	Nutritional rehab, psychotherapy, olanzapine
– Restricting type	Dieting, fasting, over-exercising	No purging/bingeing	Same
– Binge-eating/ purging type	Recurrent purging or bingeing	Hypokalemia common	Same
Bulimia Nervosa	Recurrent binge eating + compensatory purging ≥1/week	Often normal BMI; parotid hypertrophy, Russell sign, enamel erosion, electrolyte disturbances, metabolic alkalosis	Psychotherapy, nutritional rehab, SSRIs; avoid bupropion
Binge-Eating Disorder	Recurrent bingeing without purging ≥1/week	Obesity, ↑ diabetes risk	Psychotherapy, SSRIs, lisdexamfetamine
Pica	Eating non-food substances ≥1 month	Iron deficiency anemia, malnutrition	Psychotherapy, nutritional rehab, SSRIs

Gender Dysphoria	Incongruence between gender identity & assigned sex ≥6 months; distress	Interferes with social, academic, or occupational function	Social, legal, and/or medical gender affirmation

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💘 Sexual Dysfunction

- Types: Desire disorders (hypoactive/aversion), arousal disorders (ED), orgasmic (anorgasmia, premature ejaculation), pain disorders (genito-pelvic pain)
- Differential (PENIS mnemonic):
  - Psychological → nighttime erections still occur
  - Endocrine → diabetes, low testosterone
  - Neurogenic → post-op, spinal cord injury
  - Insufficient blood flow → atherosclerosis
  - Substances → meds, alcohol, SSRIs

💤 Sleep Disorders

Disorder	Key Features	Notes / Treatment
Sleep Terror Disorder	Screaming, inconsolable, during N3 non-REM, no memory	Children, triggered by stress/fever/lack of sleep; usually self-limited
Enuresis	Nighttime incontinence ≥2x/week ≥3 months, >5y old	Behavioral modification first-line; alarms or desmopressin if refractory
Narcolepsy	Excessive daytime sleepiness ≥3/week for 3 months	↓ Orexin, cataplexy, hypnagogic/hypnopompic hallucinations, sleep paralysis; treatment = sleep hygiene, stimulants, sodium oxybate

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💊 Substance-Related Disorders

Substance Use Disorder: Maladaptive pattern of use ≥2 of the following in 12 months:

- Tolerance, withdrawal
- Craving, using more/longer than intended
- Failed attempts to cut down
- Impaired functioning, social conflicts
- Dangerous use, continued use despite harm

Note: Tolerance/withdrawal from prescribed use (eg, opioids, stimulants) does not automatically indicate SUD.

Gambling Disorder: ≥4 of the following:

- Preoccupation, needing more excitement
- Failed attempts to stop
- Restlessness/irritability when stopping
- Gambling to escape negative feelings
- Chasing losses, lying, risking relationships, financial dependence
- Treatment: psychotherapy

⚡ High-Yield Mnemonics / Tips

- Eating disorder red flags: "A B B P" → Anorexia, Bulimia, Binge-eating, Pica
- Refeeding syndrome: Malnourished → sudden ↑ calories → ↑ insulin → ↓ PO_4^{3-}, K^+, Mg^{2+} → cardiac/rhabdo/seizures
- Narcolepsy mnemonic: CATS → Cataplexy, Altered sleep onset (REM), Tiredness (daytime), Sleep hallucinations
- Russell sign: Dorsal hand calluses in bulimia from induced vomiting

🔄 Transtheoretical Model of Change

Stage	Features	Motivational Strategies

Precontemplation	Denies problem; unaware of consequences	Encourage introspection, link risks to personal priorities, affirm availability
Contemplation	Acknowledges problem, ambivalent about change	Discuss pros/cons, suggest support, provide resources
Preparation / Determination	Committed, planning behavior change	Motivational interviewing, encourage initial steps, provide resources
Action / Willpower	Executes change	Self-efficacy strategies, coping skills, contingency management
Maintenance	Sustained behavior change	Reinforce habits, evaluate relapse risk, praise progress
Relapse	Regression to old behavior	Tailor response based on severity, reassure, encourage restart

Key: Change is cyclical, not linear; relapse is common and part of the process.

⚠️ Psychiatric Emergencies

Emergency	Cause / Trigger	Manifestation	Treatment / Notes
Serotonin Syndrome	↑ 5-HT (MAOIs, SSRIs/SNRIs, TCAs, tramadol, MDMA, linezolid, St. John's wort)	3 A's: Activity (clonus, hyperreflexia, tremor, seizure), Autonomic (hyperthermia, diaphoresis, diarrhea), Altered mental status	Benzodiazepines & supportive care; Cyproheptadine if severe; prevention = avoid multiple serotonergic drugs/washout
Hypertensive Crisis	MAOIs + tyramine-rich foods (cheese,	Severe hypertension via ↑ NE	Phentolamine

	cured meats, wine, chocolate)		
Neuroleptic Malignant Syndrome (NMS)	Antipsychotics (typical > atypical) + genetic risk	Malignant FEVER: Fever, Encephalopathy, Vitals unstable, Enzymes ↑ (CK), Rigidity ("lead pipe")	Dantrolene, bromocriptine/amantadine, benzodiazepines; discontinue causative agent
Delirium Tremens	Alcohol withdrawal (2–4 days after last drink)	Altered mental status, hallucinations, autonomic hyperactivity, seizures, tremors, agitation	Long-acting benzodiazepines
Acute Dystonia	Typical antipsychotics, anticonvulsants	Sudden muscle spasms, oculogyric crisis, stiffness; may	Benztropine or diphenhydramine

	(carbamazepine), metoclopramide	→ laryngospasm	
Lithium Toxicity	↑ dose, ↓ renal clearance (AKI, ACE inhibitors, thiazides, NSAIDs)	Nausea, vomiting, slurred speech, hyperreflexia, seizures, ataxia, nephrogenic diabetes insipidus	Discontinue lithium, aggressive hydration (NaCl), consider hemodialysis
Tricyclic Antidepressant (TCA) Toxicity	Overdose	Sedation, anticholinergic effects, prolonged QT/QRS, convulsions, coma, cardiotoxicity	Supportive care, ECG monitoring, $NaHCO_3$ to prevent arrhythmia, activated charcoal

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💡 Mnemonic Tips:

- Serotonin syndrome → 3 A's: Activity, Autonomic, Altered mental status
- NMS → FEVER: Fever, Encephalopathy, Vitals unstable, Enzymes ↑, Rigidity
- Transtheoretical model → "PC-PAM-R": Precontemplation → Contemplation → Preparation → Action → Maintenance → Relapse

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💊 Psychoactive Drug Intoxication & Withdrawal

Class	Drug / Mechanism	Intoxication Features	Withdrawal Features / Treatment
Depressants			
Alcohol	GABA-A positive allosteric modulator, inhibits NMDA	Emotional lability, slurred speech, ataxia, coma, blackouts, AST>ALT ("ToAST 2 ALcohol")	Tremors, insomnia, diaphoresis, seizures, hallucinosis, delirium tremens; Tx: long-acting benzodiazepines

Barbiturates	GABA-A positive allosteric modulator	CNS depression, respiratory depression	Delirium, CV collapse; Tx: supportive, assist respiration/BP
Benzodiazepines	GABA-A positive allosteric modulator	Ataxia, minor respiratory depression	Seizures, sleep disturbance, depression; Tx: taper, flumazenil in overdose
Opioids	μ-opioid receptor agonist	Euphoria, CNS/resp depression, miosis, ↓ GI motility	Mydriasis, diarrhea, rhinorrhea, yawning, piloerection; Tx: symptom mgmt, methadone, buprenorphine
Inhalants	Enhance GABA signaling	Disinhibition, euphoria, ataxia, slurred speech, periorbital rash	Irritability, dysphoria, sleep disturbance, headache
Stimulants			
Amphetamines	Reverse monoamine transporters (DAT, SERT, NET, VMAT)	Euphoria, grandiosity, mydriasis, insomnia, hyperalertness, HTN, paranoia; skin excoriations	"Meth mites" (tactile hallucinations); Tx: benzos for agitation/seizures

Caffeine	Adenosine receptor antagonist	Palpitations, agitation, tremor, insomnia	Headache, difficulty concentrating, flu-like symptoms
Cocaine	Blocks reuptake of DA, NE, 5-HT	Impaired judgment, mydriasis, diaphoresis, hallucinations, paranoia, angina, sudden cardiac death	Restlessness, hunger, depression, sleep disturbance; Tx: benzos for agitation
Nicotine	Central nicotinic ACh receptor stimulant	Restlessness	Irritability, anxiety, poor concentration, ↑ appetite; Tx: NRT, bupropion, varenicline
Hallucinogens / Other			
LSD	5-HT2A receptor agonist	Visual/auditory distortions, depersonalization, anxiety, paranoia, flashbacks, mydriasis	No specific withdrawal
Cannabis / THC	CB1 receptor agonist	Euphoria, anxiety, paranoia, slowed time perception, ↑ appetite, dry mouth, conjunctival injection	Irritability, anxiety, insomnia, ↓ appetite, depression

MDMA (ecstasy)	Reverses monoamine transporters (SERT>DAT, NET)	Euphoria, hallucinations, hyperactivity, bruxism, hyperthermia, hyponatremia, serotonin syndrome	Depression, fatigue, appetite changes, difficulty concentrating, anxiety
Phencyclidine (PCP)	NMDA receptor antagonist	Violence, nystagmus, impulsivity, psychomotor agitation, tachycardia, HTN, analgesia, psychosis, delirium, seizures	No specific withdrawal; manage symptoms

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💡 Mnemonic tips for withdrawal effects

- Alcohol: "6-48-96" timeline: tremors (6h), seizures (12-48h), hallucinosis (24-48h), delirium tremens (48-96h)
- Opioid: "COWS" - Cold turkey symptoms: yawning, lacrimation, rhinorrhea, diarrhea, piloerection
- Stimulants: Post-use crash → depression, lethargy, sleep disturbance, appetite changes

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🥂 Alcohol Use Disorder & Complications

- Diagnosis: Using general substance use disorder criteria.
- Complications: Thiamine (B1) deficiency, cirrhosis, hepatitis, pancreatitis, peripheral neuropathy, testicular atrophy.
- Treatment:
  - Naltrexone → reduces cravings (avoid in liver failure)
  - Acamprosate → supports abstinence (avoid in renal failure)
  - Disulfiram → aversive conditioning
  - Support groups: AA, therapy for patient & family

Wernicke-Korsakoff Syndrome

- Cause: Thiamine (B1) deficiency, precipitated by glucose administration before thiamine.
- Triad: Confusion, ophthalmoplegia, ataxia (Wernicke) → chronic memory loss, confabulation, personality changes (Korsakoff).

- Treatment: IV thiamine before glucose.

< - Section 3: Pharmacology - >

🧠 Psychotherapy Approaches

Type	Mechanism / Use
Behavioral therapy	Change maladaptive behaviors (e.g., systematic desensitization)
Cognitive behavioral therapy (CBT)	Identify distorted thoughts, improve coping, emotional control (alcohol triggers, anxiety, depression)
Dialectical behavioral therapy (DBT)	Borderline personality disorder, emotion regulation
Interpersonal therapy	Improve interpersonal relationships and communication
Motivational interviewing	Resolve ambivalence, enhance intrinsic motivation (substance use, weight loss)

Supportive therapy	Provide empathy, maintain hope/optimism

⚡ CNS Stimulants

- Drugs: Methylphenidate, dextroamphetamine, methamphetamine, lisdexamfetamine
- Mechanism: ↑ catecholamines (dopamine, norepinephrine) in synaptic cleft
- Clinical Use: ADHD, narcolepsy, binge-eating disorder
- Adverse Effects: Nervousness, agitation, insomnia, anorexia, tachycardia, hypertension, tics, weight loss

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🧩 Antipsychotics

Classification & Mechanism

Class	Drugs	Mechanism	Notes

Typical (1st-gen)	Haloperidol, Pimozide, Trifluoperazine, Fluphenazine, Thioridazine, Chlorpromazine	D2 receptor blockade	Primarily treat positive symptoms of schizophrenia; high EPS risk; high-potency = more neurologic SEs; low-potency = more anti-HAM
Atypical (2nd-gen)	Clozapine, Olanzapine, Risperidone, Quetiapine, Aripiprazole, etc.	D2 + 5-HT2 blockade; Aripiprazole = D2 partial agonist	Treat positive & negative symptoms; clozapine for treatment-resistant cases or suicidality

Clinical Use

- Schizophrenia, bipolar disorder with psychosis, Tourette syndrome, OCD, Huntington disease
- Clozapine: treatment-resistant psychosis, persistent suicidality

Adverse Effects

- Anti-HAM: Sedation, dry mouth, constipation, orthostatic hypotension

- Metabolic: Weight gain, dyslipidemia, hyperglycemia (especially clozapine, olanzapine)
- Endocrine: Hyperprolactinemia → galactorrhea, oligomenorrhea, gynecomastia
- Cardiac: QT prolongation
- Neurologic: EPS (ADAPT), NMS
- Ophthalmologic: Corneal deposits (chlorpromazine), retinal deposits (thioridazine)
- Hematologic / Others: Clozapine → agranulocytosis, seizures, myocarditis

Extrapyramidal Symptoms (EPS) - ADAPT

Timeframe	Type	Treatment
Hours-days	Acute dystonia (spasms, oculogyric crisis)	Benztropine, diphenhydramine
Days-months	Akathisia (restlessness)	β-blockers, benztropine, benzodiazepines

Days–months	Parkinsonism (bradykinesia, rigidity)	Benztropine, amantadine
Months–years	Tardive dyskinesia (chorea, orofacial)	Benzos, botulinum toxin, valbenazine, deutetrabenazine

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💊 Lithium

- Mechanism: Modulates neurotransmission (↓ excitatory, ↑ inhibitory) and second messengers (G proteins).
- Clinical Use: Mood stabilizer for bipolar disorder (acute mania & relapse prevention).
- Adverse Effects (LiTHIUM mnemonic):
  - L → Low thyroid (hypothyroidism)
  - I → Insipidus (nephrogenic diabetes insipidus → polyuria)
  - T → Teratogenic (Ebstein anomaly)
  - H → Hypothyroidism (repeated for emphasis)

    - I → Increased calcium (mild hypercalcemia)
    - U → Unwanted movements (tremor)
- Notes:
    - Narrow therapeutic window → monitor serum levels
    - Mostly renal excretion; reabsorbed at PCT via Na^+ channels
    - Drugs increasing toxicity: thiazides, ACE inhibitors, NSAIDs

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🚌 Buspirone

- Mechanism: Partial 5-HT1A receptor agonist
- Clinical Use: Generalized anxiety disorder (non-sedating, non-addictive)
- Onset: 1–2 weeks
- Advantages: No alcohol interaction (vs benzodiazepines)

🧠 Antidepressants Overview

1. SSRIs (Selective Serotonin Reuptake Inhibitors)

- Drugs: Fluoxetine, Paroxetine, Sertraline, Fluvoxamine, Citalopram, Escitalopram
- Mechanism: Inhibit serotonin reuptake
- Clinical Use: Depression, GAD, panic disorder, OCD, bulimia, binge-eating, social anxiety, PTSD, premenstrual dysphoric disorder, premature ejaculation
- Adverse Effects: GI upset, sexual dysfunction, SIADH, serotonin syndrome, mania if bipolar

2. SNRIs (Serotonin-Norepinephrine Reuptake Inhibitors)

- Drugs: Venlafaxine, Desvenlafaxine, Duloxetine, Levomilnacipran, Milnacipran
- Mechanism: Inhibit 5-HT & NE reuptake
- Clinical Use: Depression, GAD, neuropathic pain (Duloxetine, Milnacipran → fibromyalgia), venlafaxine → social anxiety, panic, PTSD, OCD

- Adverse Effects: ↑ BP, insomnia, sedation, nausea, sexual dysfunction

3. Tricyclic Antidepressants (TCAs)

- Drugs: Amitriptyline, Nortriptyline, Imipramine, Desipramine, Clomipramine, Doxepin, Amoxapine
- Mechanism: Inhibit 5-HT & NE reuptake
- Clinical Use: MDD, neuropathic pain, migraine prophylaxis, OCD (clomipramine), nocturnal enuresis (imipramine)
- Adverse Effects: Sedation, α1-blocking effects → hypotension, anticholinergic → tachycardia, urinary retention, dry mouth; prolonged QT; 3° TCAs worse anticholinergic than 2°
- Toxicity (Tri-C's): Convulsions, Coma, Cardiotoxicity (Na^+ channel blockade); treatment: $NaHCO_3$

4. MAO Inhibitors

- Drugs: Tranylcypromine, Phenelzine, Isocarboxazid, Selegiline (MAO-B selective)

- Mechanism: Nonselective MAO inhibition → ↑ NE, 5-HT, dopamine
- Clinical Use: Atypical depression, anxiety, Parkinson disease (selegiline)
- Adverse Effects: CNS stimulation, hypertensive crisis (tyramine-rich foods)
- Contraindications: SSRIs, TCAs, St. John's wort, meperidine, dextromethorphan, pseudoephedrine, linezolid
- Notes: Wait 2 weeks after stopping MAOIs before starting serotonergic drugs or resuming normal diet

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🟣 Atypical Antidepressants

Drug	Mechanism	Clinical Use	Key Adverse Effects / Notes
Bupropion	NE + DA reuptake inhibitor	MDD, smoking cessation	Stimulant effects: tachycardia, insomnia; seizures in bulimia/anorexia;

			↓ sexual side effects & weight gain
Mirtazapine	α2-antagonist → ↑ NE & S-HT; S-HT2/3 antagonist; H1 antagonist	MDD (esp. with insomnia/underweight)	Sedation, ↑ appetite & weight, dry mouth
Trazodone	S-HT2, α1, H1 antagonist; weak S-HT reuptake inhibitor	Insomnia (antidepressant at high doses)	Sedation, nausea, priapism, orthostatic hypotension
Vilazodone	S-HT reuptake inhibitor + S-HT1A partial agonist	MDD	Headache, nausea, diarrhea, anticholinergic; serotonin syndrome risk if combined with other serotonergic drugs
Vortioxetine	S-HT reuptake inhibitor + S-HT1A agonist + S-HT3 antagonist	MDD	Nausea, sexual dysfunction, sleep disturbances, anticholinergic; serotonin syndrome risk if combined

			with other serotonergic drugs

🚬 Pharmacotherapy for Smoking Cessation

Therapy	Mechanism	Key Points / Adverse Effects
Nicotine Replacement Therapy (patch, gum, lozenge)	Nicotinic ACh receptor agonist	Relieves withdrawal; long-acting patch + short-acting forms can be combined; headache, oral irritation
Varenicline	Nicotinic ACh receptor partial agonist	Reduces withdrawal & reward effect; adverse: GI discomfort, sleep disturbance

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💊 Medically Supervised Opioid Withdrawal / Relapse Prevention

Drug	Mechanism / Use	Key Points / Adverse Effects
Methadone	Long-acting oral opioid agonist	Used for supervised withdrawal or maintenance therapy
Buprenorphine	Partial opioid agonist (sublingual film)	Suppresses withdrawal & maintenance; can precipitate withdrawal if given too soon after full agonist
Naloxone	Short-acting opioid antagonist	IM, IV, or nasal spray; reverses acute opioid overdose (respiratory & CNS depression)
Naltrexone	Long-acting oral opioid antagonist	Prevents relapse after detox; also helps alcohol/nicotine cessation and weight loss ("naltrexone for the long trex back to sobriety")

<- The End ->