Psychiatry

MBBS Recap: high-yield notes for revision

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Revision notes for the MD/MS entrance, following DSM-5-TR and ICD-11, with the older terms an examiner may still use.

Psychopathology

Perception

- **Illusion**: a real external stimulus is misperceived (a rope seen as a snake in dim light). Common in delirium, fear and fatigue, and in healthy people.
- **Hallucination**: a perception with no external stimulus. The **commonest in schizophrenia is auditory, usually in the third person** (voices discussing or commenting on the patient).
- **Hypnagogic** (falling asleep) and **hypnopompic** (waking) hallucinations occur in normal people and are common in narcolepsy.
- **Extracampine**: felt outside the sensory field (a voice heard from another city). **Functional**: occurs only with a real stimulus in the same modality (voices heard in running water). **Reflex**: a stimulus in one modality produces a hallucination in another.
- Visual hallucinations suggest an organic cause (delirium, Lewy body dementia, alcohol withdrawal, drug intoxication); well-formed small people or animals point to **Lilliputian** hallucinations of delirium tremens.
- **Pseudohallucination**: perceived within the mind's space, with insight retained.

Delusion and named syndromes

- **Delusion**: a fixed, false belief, out of keeping with the patient's culture and not shaken by evidence. **Commonest content is persecution.** An **overvalued idea** is held strongly but can be reasoned with, and is not fully false.
- **Primary (autochthonous) delusion** arises fully formed, not understandable from the patient's mood or experience (Jaspers): delusional mood, delusional intuition and **delusional perception** (a normal perception given a sudden private meaning). **Only delusional perception is a Schneiderian first-rank symptom.** A **secondary delusion** is understandable from another state (guilt in depression, grandiosity in mania).
- **Bizarre** delusions are clearly impossible in the patient's culture (organs replaced without a scar); DSM-5-TR marks them with a specifier and no longer treats them as schizophrenia by themselves.

Syndrome	Feature
Capgras	A known person has been replaced by an identical double or impostor
Fregoli	Strangers are a persecutor in disguise, changing appearance
Othello	Delusional jealousy about the partner
de Cléram-bault	Erotomania: a person of higher status loves the patient
Cotard	Nihilistic: the body is rotting or the self does not exist, classically in severe psychotic depression
Ekbom	Delusional parasitosis
Folie à deux	A delusion shared by two closely linked people
Couvade	A husband has symptoms of his wife's pregnancy (not a delusion)
Ganser	Approximate answers to simple questions ("vorbeireden"), clouded consciousness, pseudohallucinations; classically in prisoners awaiting trial; a dissociative state, not a delusion

Schneider's first-rank symptoms

Audible thoughts, voices arguing or **commenting**, **somatic passivity**, **thought withdrawal, insertion and broadcasting**, **made** feelings, impulses and acts, and **delusional perception**. They are suggestive, not specific: they occur in mania and organic states, and neither DSM-5-TR nor ICD-11 requires them.

Disorders of thought

- **Form** (loosening of association, derailment, neologism, word salad, **knight's move** thinking); **flow or stream** (flight of ideas in mania, retardation in depression, **thought block** in schizophrenia, **perseveration** in organic states, **circumstantiality** in obsessional and epileptic personalities, **tangentiality**); **content** (delusions, obsessions, overvalued ideas); **possession** (insertion, withdrawal, broadcasting).
- **Circumstantiality** reaches the goal after many unnecessary details; **tangentiality** never reaches it. **Flight of ideas** jumps between ideas linked by sound or chance association (clang associations, puns) but the links can be followed; in **loosening of association** they cannot.
- **Pressure of speech** and **flight of ideas** go with mania; **poverty of speech** (alogia) is a negative symptom.
- **Bleuler's four As** of schizophrenia (exam history): **A**ssociation loosening, **A**ffect blunting, **A**mbivalence, **A**utism; Bleuler coined the word schizophrenia (1911); Kraepelin called it dementia praecox.

Memory and familiarity

- **Déjà vu**: a new scene feels familiar. **Déjà entendu**: something newly heard feels familiar. **Jamais vu**: a familiar scene feels new. **Jamais entendu**: a familiar spoken thing sounds new. All can occur in temporal lobe epilepsy and in healthy people.
- **Confabulation**: false memory filling a gap, without intent to deceive (Korsakoff).
- **Amnesia**: **anterograde** is failure to lay down new memories after the insult (Korsakoff, post-traumatic amnesia, ECT, alcoholic blackouts); **retrograde** is loss of memories from before it (head injury, ECT, usually shrinking over time). Both

occur in Korsakoff syndrome, with anterograde the more marked.

- **Emotion** has three components: a **subjective feeling, physiological (autonomic and hormonal) change and behavioural expression**. Its anatomy is the **limbic system** (hippocampus, amygdala, hypothalamus, cingulate gyrus, septal nuclei), regulated by the prefrontal cortex. Distinguish the classical three faculties of mind: **cognition, affect (emotion) and conation (will)**.

Insight and the psychosis–neurosis split

- Psychosis (older usage): insight lost, reality testing impaired, delusions and hallucinations, drugs the mainstay. Neurosis: insight kept, reality testing intact, personality preserved, psychotherapy with or without drugs. The terms are historical; DSM-5-TR and ICD-11 do not use "neurosis" as a category, and severe mood disorders can be psychotic.
- **Fear** is a response to a real, immediate threat; **anxiety** to an anticipated one.

Learning theory

- **Classical (Pavlov)**: a neutral stimulus paired with an unconditioned one comes to elicit an involuntary response. **Operant or instrumental (Skinner)**: voluntary behaviour followed by reward becomes more frequent. **Observational (Bandura)**: learning by watching a model.
- Operant terms: **positive reinforcement** (a reward follows the behaviour), **negative reinforcement** (an aversive stimulus is removed, so behaviour increases), **punishment** (behaviour falls), **extinction** (reinforcement stops).
- **Learned helplessness** (Seligman): after repeated inescapable aversive events the animal stops trying to escape; a model for depression.
- **Wolpe's systematic desensitisation** rests on **reciprocal inhibition**: relaxation cannot coexist with anxiety. **Aversion therapy** pairs an unwanted behaviour with an unpleasant stimulus (classical conditioning; used in alcohol dependence and paraphilias). **Token economy** is operant (used on long-stay wards). **Biofeedback** is operant control of a physiological signal.
- **Cognitive therapy (Beck)**: the **cognitive triad** of negative views of self, world and future, with automatic thoughts and cognitive distortions; designed for depression. **Rational emotive behaviour therapy**: Ellis.

Psychoanalytic ideas

- **Freud**: id (instinctual drives, "I want it now"), ego (realistic mediator), superego (moral conscience). **Transference**: the patient's past feelings carried onto the therapist. **Countertransference**: the therapist's emotional reaction to the patient.
- **Primary gain**: relief of anxiety or guilt by the symptom itself (unconscious). **Secondary gain**: interpersonal, social or occupational benefit from being ill. **Malingering versus conversion:** in **malingering** symptoms are produced **consciously for an external gain** (compensation, avoiding work or prison) and it is not a mental disorder; in **conversion (functional neurological) disorder** they are **not consciously produced**, and the primary gain is relief of an unconscious conflict; in **factitious disorder** they are produced consciously but to take the sick role, without external reward (see Somatic, dissociative and personality disorders).
- **Freud's psychosexual stages**: oral (0–1 year), anal (1–3), phallic or oedipal (3–5), latency (5–puberty), genital. **Erikson's** eight psychosocial stages run through life (trust versus mistrust in infancy, through integrity versus despair in old age). **Piaget's** cognitive stages: sensorimotor (0–2, object permanence), preoperational (2–7, egocentrism), concrete operational (7–11, conservation), formal operational (11 on, abstract thought). **Bowlby**: attachment; **Mahler**: separation–individuation.
- **Repression**, the basic defence in Freud's theory, keeps an unacceptable idea out of consciousness unconsciously; **suppression** does so deliberately and is mature.

Defence mechanisms (Vaillant's levels, as Kaplan and Sadock give them)

Level	Examples
Narcissistic (psychotic)	Denial of external reality, **distortion**, **delusional projection**
Immature	**Projection** (paranoid personality), **splitting** (all good or all bad; borderline), acting out, passive aggression, **schizoid fantasy**, hypochondriasis, **regression**, **projective identification**, introjection
Neurotic	**Repression**, **displacement** (phobias), **reaction formation** (expressing the opposite; obsessional), **isolation of affect** and **undoing** (obsessional), intellectualisation, rationalisation, **dissociation**, controlling
Mature	**Sublimation** (an unacceptable wish turned into acceptable action), humour, altruism, anticipation, **suppression** (deliberate), asceticism

- Pairings an examiner asks: **phobia, displacement**; **OCD, isolation, undoing and reaction formation**; **paranoia, projection**; **borderline, splitting**; **conversion, repression** (with the symptom symbolising the conflict).

Classification and the minimum durations

- **ICD-11** (WHO, in force from 2022) and **DSM-5-TR** (APA, 2022) differ in places; where they do, an examiner usually means DSM-5-TR for durations. ICD-10 (the classic texts' F codes) is still the version many Indian and Nepali books follow.

Disorder	Minimum duration (DSM-5-TR)
Brief psychotic disorder	1 day to under 1 month
Schizophreniform disorder	1 to 6 months
Schizophrenia	6 months (1 month active); ICD-11 1 month
Delusional disorder	1 month (ICD-11 3 months)
Manic episode / hypomanic episode	1 week (any if admitted) / 4 days
Major depressive episode	2 weeks
Persistent depressive disorder, cyclothymia	2 years (1 year in children)
Panic disorder (worry after attacks)	1 month
Generalised anxiety disorder, phobias	6 months
Acute stress disorder / PTSD	3 days to 1 month / over 1 month
Adjustment disorder	Onset within 3 months of the stressor; ends within 6 months after it
ADHD, oppositional defiant disorder	6 months

Disorder	Minimum duration (DSM-5-TR)
Tic disorders: Tourette, persistent tic	1 year
Bulimia nervosa, binge eating	Once a week for 3 months
Insomnia disorder	3 nights a week for 3 months

- **Commonest**: as a group, **anxiety disorders** are the most prevalent mental disorders worldwide (GBD 2019: about 300 million people, depressive disorders about 280 million), and **depression is the leading cause of disability** among them (WHO). As single disorders, **major depression** has the highest lifetime prevalence (about 17%) and **specific phobia** the highest 12-month prevalence (NCS-R, US). **Delirium** is the commonest psychiatric syndrome in older medical and surgical inpatients.

Schizophrenia and psychosis

Definition and duration

- **DSM-5-TR schizophrenia**: two or more of delusions, hallucinations, disorganised speech, grossly disorganised or catatonic behaviour, **negative symptoms**, for a significant part of one month, or less if treated (at least one must be delusions, hallucinations or disorganised speech), with **continuous signs for at least six months** including prodrome and residual phases. **ICD-11** needs the symptoms for **one month**, so duration is a recognised difference.
- **Catatonia** is now a syndrome, not a subtype: DSM-5-TR needs **three of twelve signs** (stupor, catalepsy, waxy flexibility, mutism, negativism, posturing, mannerism, stereotypy, agitation, grimacing, echolalia, echopraxia), as a specifier of psychotic, mood or medical disorders; it is commoner in mood disorders than in schizophrenia. A **lorazepam challenge** that relieves it confirms it; ECT for the lorazepam non-responder or malignant catatonia.
- DSM-5 and ICD-11 dropped the classical subtypes. The older ones are still asked: **paranoid** (commonest, personality preserved), **hebephrenic/disorganised** (early onset, inappropriate affect, worst prognosis), **catatonic** (waxy flexibility, posturing, negativism, mutism, echolalia and echopraxia, gegenhalten; onset in early adult life, relatively good prognosis; treat with lorazepam, then ECT), **simple** (insidious negative symptoms only), residual, undifferentiated, oneiroid (waking dreams), pseudoneurotic (pananxiety), Pfropf (with intellectual disability).

Related disorders by duration and mood

Disorder	Key point
Brief psychotic disorder	At least one day and under one month, with full return to normal; often after a stressor or postpartum (ICD-11: **acute and transient psychotic disorder**, onset within two weeks, usually resolving within three months)
Schizophreniform	**One to six months**; the same symptoms
Schizophrenia	At least six months (DSM-5-TR)
Schizoaffective	Psychosis concurrent with a major mood episode, mood symptoms present for the majority of the illness, and delusions or hallucinations without mood symptoms for at least two weeks
Delusional disorder	One or more delusions for at least **one month (DSM-5-TR)**, **three months (ICD-11)**; criterion A of schizophrenia never met, no prominent hallucinations, functioning relatively preserved. DSM-IV required non-bizarre delusions; DSM-5 allows bizarre ones with a "bizarre content" specifier. Types: persecutory (commonest), erotomanic, grandiose, jealous, somatic, mixed. Treated with an antipsychotic; poor insight limits adherence
Substance or medication induced	Psychosis arising during or soon after intoxication or withdrawal (cannabis, amphetamines, cocaine, alcohol, steroids, levodopa); a urine drug screen is part of every first-episode work-up

Epidemiology and biology

- Lifetime risk: **about 1%** in the classic texts; DSM-5-TR gives **0.3 to 0.7%**. Onset earlier in men (late teens to mid-20s) than women, with a second female peak in the late 40s. Monozygotic concordance is about 40 to 50%; risk is about 10% with one affected parent or sibling and about 40% with both parents. Genome-wide studies implicate many common variants (including the **complement C4** locus on chromosome 6) and rare copy-number variants such as **22q11.2 deletion** (velocardiofacial syndrome, about 25% risk).
- **Dopamine hypothesis**: **mesolimbic hyperactivity** gives positive symptoms; **mesocortical hypoactivity** (prefrontal cortex) gives negative and cognitive symptoms. Glutamate (NMDA hypofunction; ketamine and phencyclidine mimic it) and serotonin are also implicated. Imaging: ventricular enlargement, reduced prefrontal and temporal volume.
- Risk factors: family history, urban upbringing, migration, heavy cannabis use in adolescence, obstetric complications, **late winter or early spring birth**, prenatal infection, advanced paternal age.
- **High expressed emotion** in the family (critical comments, hostility, emotional over-involvement) predicts **relapse**, not onset; family intervention lowers it.

Prognosis

Good	Poor
Acute, late onset (over 35), clear precipitant, mood symptoms, **positive symptoms**, female, good premorbid adjustment, family history of mood disorder, short duration, normal CT, married	Insidious, early onset (under 20), **negative symptoms**, flat affect, male, family history of schizophrenia, long duration, ventricular enlargement, poor premorbid adjustment, disorganised, simple and chronic catatonic types

Treatment

- An antipsychotic chosen by side-effect profile; **second-generation (atypical)** drugs are usual first choices (risperidone, olanzapine, aripiprazole, quetiapine, amisulpride); NICE and APA (2020) say first- and second-generation drugs are about equally effective except clozapine. Continue for **at least one to two years after a first episode**; most relapses follow stopping. **Treatment-resistant** (two adequate trials, at least one atypical, of six weeks or more, failed): **clozapine**, the only drug proven superior. Long-acting depot injections (fluphenazine decanoate, haloperidol decanoate, paliperidone palmitate, aripiprazole) for poor adherence.
- Early intervention, family psychoeducation (reduces relapse; expressed emotion matters), cognitive remediation, social

skills training, assertive community treatment, supported employment.

- Newer agents: xanomeline–trospium (a muscarinic agonist, FDA 2024) works through a non-dopaminergic route and avoids D2 side effects.

Dopamine pathways and drug effects

Pathway	Role	Effect of blockade
Mesolimbic	Positive symptoms	Antipsychotic effect
Mesocortical	Negative and cognitive symptoms	Little benefit; may worsen negative symptoms
Nigrostriatal	Motor control	**Parkinsonism**, akathisia, dystonia, tardive dyskinesia
Tuberoinfundibular	Inhibits prolactin	Hyperprolactinaemia

- **Drug-induced parkinsonism** (nigrostriatal blockade, weeks after starting) responds to anticholinergics (trihexyphenidyl, benztropine, biperiden), or lowering the dose or switching drug.

Mood disorders

Depressive disorders

- **Major depressive episode (DSM-5-TR)**: five or more of nine symptoms for **at least two weeks**, one being depressed mood or loss of interest. The nine: depressed mood, anhedonia, appetite or weight change, sleep change, psychomotor change, fatigue, worthlessness or guilt, poor concentration, thoughts of death or suicide; present nearly every day. DSM-5 removed the **bereavement exclusion**. Lifetime risk about 15 to 20%, **women twice men**. Depression is the **leading cause of disability among mental disorders** (WHO) and the **commonest diagnosis among people who die by suicide**.
- Biology: monoamine hypothesis (serotonin, noradrenaline), **HPA axis overactivity** (raised cortisol, **dexamethasone non-suppression**, the historical test), reduced hippocampal volume, low BDNF; sleep shows short REM latency.
- **Persistent depressive disorder (dysthymia)**: depressed mood most days for at least **two years in adults (one year in children and adolescents)** with two or more other symptoms, and no symptom-free interval over two months. Cyclothymia also needs two years, of fluctuating hypomanic and depressive symptoms.
- **Melancholic features**: lack of mood reactivity, early morning waking, diurnal variation (worse in the morning), marked weight loss, excessive guilt; responds well to ECT and tricyclics.
- **Atypical features**: **mood reactivity**, hypersomnia, hyperphagia and weight gain, **leaden paralysis**, rejection sensitivity; relatively good response to **MAO inhibitors**.
- **Psychotic depression**: mood-congruent delusions (guilt, poverty, nihilism) or hallucinations; antidepressant plus antipsychotic, or **ECT**.
- **Seasonal pattern**: winter onset, treat with bright light therapy.
- **Premenstrual dysphoric disorder** is a DSM-5 depressive disorder. **Disruptive mood dysregulation disorder** (children, one year, severe irritability) too.
- PMDD (irritability, low mood, bloating and breast tenderness in the final week before menses, easing within a few days of the onset of menses and minimal in the week after; confirmed on two cycles of daily ratings): **SSRIs first line**, daily or luteal-phase only, working within days (unlike in depression); drospirenone-containing combined pills are the alternative, and GnRH agonists for resistant cases (ACOG Clinical Practice Guideline 7, 2023).
- **Normal bereavement versus depression:** grief comes **in waves tied to reminders**, with sadness, yearning and sleep and appetite change, but **self-esteem is preserved**, the person can anticipate pleasure, and brief **perceptions of the dead person (hearing the voice, seeing the person) are common and culturally normal, not psychosis**. Major depression is pervasive low mood with **worthlessness, self-blame, suicidal thoughts or marked functional loss**. DSM-5 removed the bereavement exclusion, so depression can be diagnosed in the bereaved when the picture fits. **Prolonged grief disorder** (DSM-5-TR 2022: persistent yearning or preoccupation for at least **12 months** in adults, 6 months in children; ICD-11: at least 6 months) is a separate diagnosis. Treatment is support, with grief-focused therapy for the prolonged form; antidepressants only if depression is present.
- **Kübler-Ross's stages of reaction to dying or loss**: **denial** (first), anger, bargaining, depression, acceptance. A description of common reactions in terminal illness, not a fixed sequence or a diagnostic one; patients move back and forth.

Postpartum states

State	Onset and course
Postpartum blues	**Half or more** of mothers (estimates 50 to 80%); peaks on **days 3 to 5**; resolves within **about two weeks** with reassurance alone
Postpartum depression	About 10 to 15%; DSM-5-TR's **peripartum onset** specifier covers onset **in pregnancy or within four weeks of delivery**; in practice the first year. Screen with the **Edinburgh Postnatal Depression Scale**. Psychotherapy, an SSRI (**sertraline** preferred in breastfeeding); **zuranolone** (oral, two weeks, FDA 2023), a neurosteroid GABA-A modulator, is licensed in the US; **brexanolone** (a 60-hour infusion, FDA 2019, the first drug for it) was withdrawn from the market at the end of 2024
Postpartum psychosis	**1 to 2 per 1,000** births; onset within days to two weeks; confusion, perplexity, delusions, mania; most are **bipolar** episodes; risk of suicide and infanticide; an emergency: admit (a mother-and-baby unit where available), antipsychotic, lithium, ECT if severe

Bipolar disorders

- **Manic episode**: abnormally elevated, expansive or irritable mood with increased energy for **at least one week** (any duration if hospitalised), with three or more (**four if the mood is only irritable**) of grandiosity, reduced need for sleep, pressure of speech, flight of ideas, distractibility, increased goal-directed activity, risky behaviour (**DIGFAST** is the usual mnemonic). Marked impairment, psychosis or admission.
- **Hypomania**: **four days**, no marked impairment, no psychosis.
- **Bipolar I**: at least one manic episode (depression not required). **Bipolar II**: hypomania and major depression, never mania. ICD-11 follows the same I/II split. Lifetime risk of bipolar I about 1%, **equal in men and women**; onset late teens to twenties; strongest genetic loading of the major disorders (monozygotic concordance about 60 to 70%).
- **Mixed features** specifier (DSM-5): three or more opposite-pole symptoms during an episode.
- **Rapid cycling**: four or more episodes in a year; treat with valproate or lithium plus avoiding antidepressants.

- **Terms**: euphoria (pleasant mood), **elation** (more than euphoria, with increased activity), **exaltation** (elation with grandiosity), **ecstasy** (rapture). A patient with unreasonable happiness and increased psychomotor activity is elated.

Treatment

- **Acute depression**: psychotherapy (CBT, behavioural activation, interpersonal therapy) for mild depression; **SSRIs first** among drugs (a previous response to a drug is the best guide to the choice). Some benefit appears in **one to two weeks** and full effect by four to six; the classic texts call a trial failed only after **four to six weeks at an adequate dose** (NICE 2022 reviews at about four weeks); if no response, switch class; if partial, **augment (lithium, then thyroid hormone, or an atypical antipsychotic)**. Continue for at least **6 months** after remission (NICE 2022). Recurrent depression (three or more episodes) needs **maintenance for two to five years or lifelong**.
- **Treatment-resistant**: ECT, esketamine nasal spray with an oral antidepressant (a modern option, rapid onset), augmentation, repetitive transcranial magnetic stimulation (rTMS).
- **Antidepressant-induced switch to mania**: stop it and start a mood stabiliser.
- **Mania**: stop any antidepressant; lithium, valproate, or an antipsychotic (olanzapine, risperidone, quetiapine, haloperidol), with a benzodiazepine for agitation; ECT in severe or resistant cases. **Bipolar depression**: quetiapine, lurasidone, lamotrigine; avoid an antidepressant alone.
- **Maintenance**: **lithium** (the exam's drug of choice and the best evidence for relapse and suicide prevention), valproate, lamotrigine (best for the depressive pole), olanzapine, quetiapine.
- **Antidepressant sexual effects**: reduced libido, delayed orgasm and ejaculation, erectile dysfunction. **Paroxetine** (and dapoxetine) are used to delay premature ejaculation. Least sexual effect: **mirtazapine, bupropion, agomelatine, vortioxetine**.

Pseudodementia

Depressive pseudodementia: the patient **complains** of memory loss, says "I don't know", has variable performance, no confabulation, recent history of depression, and the CT is normal; contrast dementia (see Neurocognitive disorders).

Anxiety, OCD and stress-related disorders

Generalised anxiety disorder

- Excessive worry on most days for **at least six months**, with at least three of restlessness, fatigue, poor concentration, irritability, muscle tension and sleep disturbance (DSM-5-TR). Commoner in women; onset often in the twenties. First line: **SSRI or SNRI** (sertraline, escitalopram, venlafaxine, duloxetine) with cognitive behavioural therapy (CBT) (NICE). Buspirone and pregabalin are alternatives. Benzodiazepines only for a few weeks in a crisis; older texts gave them as the drug of choice.

Panic disorder

- Recurrent unexpected attacks peaking within minutes (palpitations, sweating, trembling, breathlessness, chest pain, fear of dying, derealisation), followed by a **month** of worry or behaviour change. Commoner in women; **lactate infusion, CO2 inhalation and yohimbine** provoke attacks (the locus coeruleus noradrenergic and suffocation-alarm models). Often with **agoraphobia** (DSM-5: fear in two or more of five situation types; diagnosed separately from panic disorder since DSM-5) (fear of situations where escape is difficult: open spaces, crowds, queues, public transport, being alone away from home).
- **Long-term: SSRI (for example sertraline) with CBT.** An attack: a benzodiazepine (alprazolam, lorazepam) gives fast relief but risks dependence and rebound, so it is not maintenance. Propranolol and buspirone are not effective for panic.
- Exclude hyperthyroidism, phaeochromocytoma, hypoglycaemia, arrhythmia, caffeine and stimulants.

Phobias

- **Specific phobia**, **social anxiety disorder** (shy bladder, erythrophobia or blushing), **agoraphobia**. DSM-5-TR duration is six months; ICD-11 says "several months".
- **Specific phobia** is the commonest anxiety disorder; animal, natural environment, blood-injection-injury (the one with a **vasovagal faint**, a fall in heart rate after an initial rise), situational types. **Social anxiety disorder** begins in adolescence.
- Named phobias: **acrophobia** (heights), **aerophobia** (flying), claustrophobia (closed spaces), mysophobia (dirt), thanatophobia (death), nyctophobia (darkness), xenophobia (strangers), sitophobia (eating).
- **Treatment**: behaviour therapy by exposure. **Systematic desensitisation (Wolpe)**: relaxation training, a graded hierarchy of feared situations, and exposure step by step; it works by **reciprocal inhibition** (anxiety cannot coexist with relaxation), a form of counter-conditioning. **Flooding** (immediate prolonged exposure to the most feared stimulus, in vivo; **implosion** is the imagined form) works by extinction. **Modelling** (watching another approach the object; Bandura). Specific phobia: exposure is the treatment of choice, drugs have little role. Social anxiety: CBT, SSRI or venlafaxine; propranolol for performance anxiety.

Obsessive-compulsive and related disorders

- **OCD**: obsessions (**ego-dystonic**, intrusive, recurrent thoughts, images or urges) and compulsions, taking over an hour a day or causing distress. **Commonest obsession is contamination, with washing; the second is pathological doubt, with checking.** Lifetime prevalence about 2 to 3%, equal in adult men and women (earlier onset in boys). Circuit: **orbitofrontal cortex, anterior cingulate and caudate nucleus** (cortico-striato-thalamo-cortical loop); serotonin implicated (hence SSRIs). Linked with **tic disorders and Tourette syndrome**; sudden childhood onset after streptococcal infection was proposed as **PANDAS** (now PANS; still debated). Main defences: isolation, undoing, reaction formation.
- **Obsessive-compulsive personality disorder is ego-syntonic**; OCD is ego-dystonic.
- **Best psychotherapy: exposure and response prevention (ERP)**, a form of CBT. Not systematic desensitisation or flooding. **Drugs: an SSRI at higher doses and longer trials, or clomipramine** (the most serotonergic tricyclic); augment with risperidone or aripiprazole; deep brain stimulation or capsulotomy for severe resistant cases.
- **Related (ICD-11 groups them with OCD)**: body dysmorphic disorder (a perceived defect in appearance; SSRI, CBT), hoarding disorder, **trichotillomania** (hair pulling; **habit**

reversal training), excoriation disorder, hypochondriasis (ICD-11).

Trauma and stress-related disorders

- **Acute stress disorder (DSM-5-TR)**: trauma symptoms (intrusion, avoidance, negative mood, dissociation, arousal) from **three days to one month**. **PTSD**: symptoms **beyond one month**, four clusters: intrusion (flashbacks, nightmares), avoidance, negative alterations in cognition and mood, arousal (hypervigilance, startle). Delayed expression if onset is six months or more after.
- ICD-11 splits **PTSD** (re-experiencing in the present, avoidance, sense of threat) from **complex PTSD** (adds disturbances in self-organisation: affect dysregulation, negative self-concept, relationship difficulty; follows prolonged trauma). **Prolonged grief disorder** is in both manuals (ICD-11: at least six months after the loss; DSM-5-TR: 12 months for adults).
- **Adjustment disorder**: symptoms within **three months** of an identifiable stressor (**ICD-11: within one month**), ending within six months after the stressor stops; the stressor can be minor, and the symptoms lack another disorder's pattern.
- **Treatment of PTSD**: **trauma-focused CBT or EMDR** first; SSRIs (sertraline, paroxetine) or venlafaxine. **Prazosin** for nightmares is the exam answer; a large 2018 trial (Raskind, NEJM) found no benefit over placebo, so its place is now debated and guidelines rate it weakly at most. Single-session **psychological debriefing** does not prevent PTSD and may harm (NICE 2018). Risk factors: severity of the trauma, earlier trauma, poor social support, female sex; lifetime risk about 7 to 8%.

Somatic, dissociative and personality disorders

Somatic symptom disorders

- **Somatic symptom disorder** (DSM-5-TR; replaces somatisation and pain disorders): distressing symptoms with excessive thoughts, feelings or behaviours, more than six months of being symptomatic. **Illness anxiety disorder** (replaced hypochondriasis): preoccupation with having a serious disease with minimal symptoms. ICD-11 uses **bodily distress disorder**. Treat with CBT and a regular, single, caring doctor; an SSRI helps.
- **Somatisation (Briquet)**: multiple unexplained symptoms in many systems, a thick case file ("fat file"), unconscious motive.
- **Conversion disorder (functional neurological symptom disorder)**: altered motor or sensory function (weakness, paralysis, blindness, aphonia, **psychogenic non-epileptic seizures**) with findings **incompatible with a neurological disease** (Hoover's sign, give-way weakness, non-anatomical sensory loss), not intentional. Classically after a stressor, with repression and **primary gain**; DSM-5 no longer requires a psychological stressor, and the diagnosis rests on positive signs. **ICD-11** places it among the dissociative disorders as **dissociative neurological symptom disorder**. **La belle indifférence** (paradoxical lack of concern) is classical but not reliable. Management: positive diagnosis, explanation, physiotherapy, CBT.
- **Pseudoseizures (psychogenic non-epileptic seizures)**: onset gradual, often in front of others after emotional upset, variable pattern, long, **eyes closed and resisting opening**, side-to-side head movement, pelvic thrusting, plantar response normal, **prolactin and EEG normal**; true generalised seizures are stereotyped and short, with eyes open, lateral tongue-biting, incontinence, an upgoing plantar, **serum prolactin raised 10 to 20 minutes after**, and postictal slowing. **Video-EEG** is the gold standard. About 10 to 20% of patients also have epilepsy.

Factitious disorder and malingering

	Inten-tional?	Motive	Notes
Malingering	Yes	**External gain** (avoiding prison or work, compensation)	Not a mental disorder; refuses tests
Factitious disorder	Yes	Sick role, atten-tion, sympathy (internal; the motive is uncon-scious)	Agrees to tests; **Munchausen** is the chronic form; **by proxy** is imposed on another, usually a child (a form of abuse)
Conversion/ somatic	No	Unconscious	Unintentional

Dissociative disorders

- Disruption of memory, identity, consciousness or perception. **Dissociative amnesia** (inability to recall autobiographical information after stress; **fugue**, sudden purposeful travel away with a loss of identity or past, is its specifier in DSM-5-TR). **Dissociative identity disorder** (two or more distinct personality states). **Depersonalisation/derealisation disorder** (detachment from self or surroundings, reality testing intact).
- **Ganser syndrome**: approximate answers (asked 2 + 2, says 5). Trance and possession states (**common presentations in Nepal and South Asia**) are included in the dissociative group (culturally accepted forms are not disorders).
- Treat the stressor; amnesia often recovers; a sedated interview (benzodiazepine, abreaction) may help recall.

Personality disorders

- DSM-5-TR clusters (unchanged from DSM-IV; the alternative dimensional model is in Section III). **ICD-11 replaced them with one diagnosis graded as mild, moderate or severe**, with trait domains (negative affectivity, detachment, dissociality, disinhibition, anankastia) and a borderline pattern specifier.

Cluster	Disorders	Feature
A (odd, eccentric)	Paranoid, schizoid, schizotypal	Schizotypal has magical thinking and is genetically related to schizo-phrenia; **schizoid** avoids relation-ships, avoidant desires them
B (dramatic, erratic)	Antisocial, **borderline**, histrionic, narcissistic	Borderline: unstable relationships and self-image, impulsivity, self-harm, chronic emptiness; **splitting** and projective identification
C (anxious, fearful)	Avoidant, dependent, **obsessive-compulsive (anankastic)**	OCPD is ego-syntonic, perfectionist and rigid

Disorder	One-line picture
Paranoid	Pervasive distrust and suspicion, bears grudges; projection
Schizoid	Detached, solitary by choice, emotionally cold, indifferent to praise or criticism

Disorder	One-line picture
Schizotypal	Odd beliefs, magical thinking, ideas of reference, eccentric speech and dress
Antisocial	Disregard for others' rights, deceit, impulsivity, no remorse; **conduct disorder before 15**, age at least 18; male, prisons
Borderline	Unstable relationships, self-image and mood, fear of abandonment, **recurrent self-harm**, chronic emptiness, transient paranoia or dissociation under stress; female in clinics
Histrionic	Attention-seeking, seductive, shallow and shifting emotion, suggestible
Narcissistic	Grandiose, needs admiration, lacks empathy, entitled
Avoidant	Feels inadequate, fears rejection, avoids contact though wanting it
Dependent	Needs to be cared for, cannot decide alone, submissive
Obsessive-compulsive (anankastic)	Perfectionism, orderliness, control, rigidity, miserly; ego-syntonic

- Treat **borderline** with **dialectical behaviour therapy (DBT, Linehan)**, mentalisation-based therapy or schema therapy; drugs only for symptoms (NICE: no drug licensed for the disorder itself). **Multiple personality** is not a personality disorder: it is dissociative identity disorder.

Substance use

Dependence

- **ICD-10 dependence**: three or more of six (strong desire, impaired control, withdrawal, tolerance, neglect of other interests, persistent use despite harm) in a year. **ICD-11 dependence**: two of three features (impaired control; use becoming a priority over other things; physiological features: tolerance, withdrawal, repeated use to relieve withdrawal) over 12 months, or **three months** if use is continuous (daily or almost daily); **harmful pattern of use** for damage without dependence. DSM-5-TR merges abuse and dependence into one **substance use disorder** graded by 2–3 mild, 4–5 moderate, 6 or more severe criteria (of eleven).
- **Stages of change (Prochaska and DiClemente)**: precontemplation (no problem acknowledged, denial), **contemplation** (acknowledges and weighs pros and cons, ambivalent, no plan), preparation (decision with a plan), action (behaviour changes), maintenance (from about six months), relapse. **Motivational interviewing** is used to move between them.

Alcohol

- **Screening**: **CAGE** (cut down, annoyed, guilty, eye-opener; two or more positive is significant); **AUDIT** (WHO, ten questions, 8 or more hazardous). **Markers**: raised **GGT** (the commonest marker used), **MCV** (macrocytosis), **carbohydrate-deficient transferrin** (the most specific of the classic markers); **phosphatidylethanol** in blood and urinary **ethyl glucuronide** are the newer direct markers. Withdrawal severity: **CIWA-Ar**.
- **Blackout** (alcoholic palimpsest): **anterograde amnesia for events during intoxication**, consciousness and behaviour apparently normal at the time; linked to a rapidly rising blood alcohol level, and common in heavy drinkers who are not dependent too. The **Mellanby effect**: a given blood alcohol level impairs more on the **rising limb** than the falling limb, so fast drinking is worse. **Reverse tolerance (sensitisation)**: repeated use makes the same dose stronger, classically with **cocaine and amphetamines** (stimulant psychosis at lower doses later); ordinary tolerance is the rule for alcohol, benzodiazepines and nicotine. Do not confuse it with the **loss of tolerance in late alcoholism** (liver damage, lower body mass), where a little alcohol intoxicates.

Phase after last drink	Features
6–12 h	Insomnia, headache, anxiety, tremor, sweating, palpitations, anorexia
12–24 h	**Alcoholic hallucinosis**: clear sensorium, auditory hallucinations, delusions of persecution or jealousy
24–48 h	**Withdrawal seizures** ("rum fits"), usually generalised tonic-clonic
48–72 h	**Delirium tremens**: disorientation, coarse tremor, autonomic hyperactivity, fever, **visual (Lilliputian) hallucinations**, the most serious state

- **Withdrawal treatment**: **benzodiazepines** (long-acting diazepam or chlordiazepoxide; **lorazepam or oxazepam in liver disease or the elderly**, since they avoid hepatic oxidation) with **thiamine** and fluids. In delirium tremens give an intravenous benzodiazepine titrated to calm; haloperidol alone lowers the seizure threshold and does not treat the withdrawal. Phenytoin does not help withdrawal seizures.
- **Wernicke encephalopathy**: triad of **confusion, ophthalmoplegia (lateral rectus palsy, nystagmus) and ataxia**, from thiamine deficiency; the full triad is present in only **10 to 20%** of cases at autopsy, so treat on suspicion; **give parenteral thiamine before or with glucose** (high dose, for example 200 to 500 mg intravenously three times a day; RCP and EFNS guidance); ophthalmoplegia improves first, ataxia may persist. The **mammillary bodies** are the most affected.
- **Korsakoff syndrome**: chronic, **anterograde amnesia more than retrograde**, **confabulation**, loss of insight, apathy. **Mammillary bodies and dorsomedial thalamic nucleus**; the **hippocampus is relatively spared**, which separates it from Alzheimer disease. Together: Wernicke–Korsakoff syndrome.
- **Marchiafava–Bignami**: demyelination and necrosis of the corpus callosum in chronic heavy drinkers (red wine).
- **Relapse prevention**: **disulfiram** blocks **aldehyde dehydrogenase** so acetaldehyde accumulates (flushing, palpitations, nausea, hypotension); needs a motivated patient and does not treat physical dependence. Do not confuse with **fomepizole**, which blocks alcohol dehydrogenase in methanol and ethylene glycol poisoning. **Naltrexone** and **acamprosate** are anti-craving drugs; topiramate and baclofen are others. Gabapentin has evidence in mild withdrawal.

Opioids

- **Intoxication**: **miosis** (no tolerance develops to it), respiratory depression, sedation, bradycardia, hypotension, constipation. **Withdrawal**: **mydriasis**, lacrimation, rhinorrhoea, yawning, piloerection, diarrhoea, muscle aches, insomnia and tachycardia; distressing but seldom fatal.
- **Overdose**: **naloxone**. **Detoxification and substitution**: **methadone** (full mu agonist; maintenance), **buprenorphine** (partial mu agonist, kappa antagonist), clonidine and lofexidine for autonomic symptoms. **Naltrexone** (antagonist) for relapse prevention after detox.

- Potency order: fentanyl, buprenorphine, morphine, pentazocine, codeine. Pentazocine is a kappa agonist and weak mu antagonist (partial agonist). **Naloxone** has a short action (about an hour), so re-sedation after a long-acting opioid needs an infusion; buprenorphine binds tightly and needs large naloxone doses.

Nicotine, cannabis, stimulants

- **Smoking cessation**: nicotine replacement, **bupropion** (noradrenaline and dopamine reuptake inhibitor; lowers seizure threshold), **varenicline** (partial agonist at the alpha-4 beta-2 nicotinic receptor; most effective single agent; neuropsychiatric events were not confirmed as a concern in the EAGLES trial, though older texts list suicidal ideation).
- **Cocaine and amphetamines**: intoxication with euphoria, mydriasis, hypertension, hyperthermia, psychosis; withdrawal is a crash with depression and hypersomnia. **Cocaine**: formication ("cocaine bugs"), nasal septal perforation, myocardial infarction (avoid beta-blockers alone). **Cannabis**: conjunctival injection, increased appetite, tachycardia, dry mouth, amotivational syndrome, psychosis risk with heavy adolescent use, **cannabinoid hyperemesis syndrome** (relieved by hot showers). **Benzodiazepine withdrawal**: anxiety, insomnia, seizures; slow taper, often after switching to diazepam. **Hallucinogens (LSD, psilocybin)**: visual distortions, synaesthesia, **flashbacks** (hallucinogen persisting perception disorder). **Phencyclidine**: violence, vertical and horizontal nystagmus. **Inhalants**: adolescents, "sudden sniffing death" from arrhythmia.
- **Behavioural addictions**: **gambling disorder** is the only one in DSM-5-TR's main text (internet gaming disorder is in Section III, for further study); **ICD-11** lists both **gambling disorder and gaming disorder**. Caffeine intoxication and withdrawal are DSM-5-TR diagnoses; caffeine use disorder is in Section III.

Neurocognitive disorders

Delirium

- **Acute** disturbance of **attention and awareness**, **fluctuating over hours**, with additional cognitive disturbance, due to a medical condition, drug or withdrawal. It affects 10 to 30% of medical inpatients, up to half of older surgical patients (hip fracture) and most ventilated ICU patients. **Hypoactive delirium is the commonest form and the most often missed**; mixed forms are common. Screening: **Confusion Assessment Method (CAM; CAM-ICU)**, 4AT. **EEG shows diffuse slowing** (fast activity in alcohol or sedative withdrawal). Clouded consciousness is the best differentiator from dementia, with disorientation, sundowning, disturbed sleep–wake cycle, illusions and hallucinations, incoherent speech, abnormal psychomotor activity (hyper- or hypoactive).
- Causes: infection, metabolic, drugs (anticholinergics, benzodiazepines, opioids), withdrawal, hypoxia, postoperative. Treat the cause; non-drug measures first; low-dose haloperidol for severe agitation; avoid benzodiazepines except in alcohol or sedative withdrawal. Most episodes resolve with treatment of the cause, but delirium raises mortality and the later risk of dementia; **pre-existing dementia is the strongest risk factor**.

Dementia (major neurocognitive disorder, DSM-5-TR)

Feature	Delirium	Dementia
Onset	Acute	Insidious
Course	Fluctuating	Progressive (only **Lewy body dementia fluctuates**)
Consciousness and attention	Clouded; attention impaired	Clear until late; attention preserved
Memory	Immediate and recent impaired; remote spared	Recent then remote
Speech	Incoherent	Word-finding difficulty
Reversibility	Usually	Usually not

- **Assessment**: **MMSE** (30 points; below 24 suggests cognitive impairment, adjusted for education), **MoCA** (30; under 26; better for mild impairment and executive function), clock drawing. **Mild neurocognitive disorder** (DSM-5-TR; mild cognitive impairment) is a modest decline with independence kept.
- **Reversible (treatable) causes** to exclude: **hypothyroidism, vitamin B12 deficiency, neurosyphilis**, normal pressure hydrocephalus, chronic subdural haematoma, a benign tumour, drugs, depression (pseudodementia), HIV; basic work-up includes thyroid function, B12, syphilis serology and imaging.
- **Dementia versus pseudodementia**: dementia patients rarely complain of memory loss, give near-miss answers, confabulate, and perform consistently badly; depressed patients complain and say "I don't know", do not confabulate and vary in performance.

Types and clues

Dementia	Clue
Alzheimer disease	Commonest (60 to 70% of dementia), irreversible; **recent memory loss first**; anomic aphasia commonest; no focal motor signs early
Dementia with Lewy bodies	**Fluctuating cognition, recurrent well-formed visual hallucinations, parkinsonism**, REM sleep behaviour disorder, **severe neuroleptic sensitivity** (antipsychotics can cause severe rigidity or neuroleptic malignant syndrome; use cholinesterase inhibitors, quetiapine or clozapine if needed)
Frontotemporal (Pick)	**Early personality change, disinhibition, apathy, loss of empathy, hyperorality**, language variants; **memory relatively preserved**; onset usually before 65; tau or TDP-43
Vascular	Second commonest; stepwise course, focal signs, emotional incontinence, vascular risk factors; **Binswanger disease** is the small-vessel white-matter form
Creutzfeldt–Jakob	Rapid decline within months, **startle myoclonus**, **periodic sharp wave complexes** on EEG, CSF 14-3-3 (classic) and **RT-QuIC** (now the most specific test), cortical ribboning and basal ganglia high signal on MRI diffusion; a prion disease, death within about a year
Normal pressure hydrocephalus	**Gait disturbance (wide-based, magnetic), urinary incontinence, dementia**, with ventriculomegaly out of proportion to sulcal widening; **treatable by shunting**
Parkinson disease dementia	Dementia more than a year after motor symptoms (Lewy body dementia when dementia first or within a year)

- **Cortical versus subcortical dementia: cortical** (Alzheimer disease, frontotemporal): **aphasia, apraxia, agnosia**, early amnesia. **Subcortical** (Parkinson disease dementia,

Huntington disease, **HIV-associated neurocognitive disorder**, progressive supranuclear palsy, normal pressure hydrocephalus, vascular): **psychomotor slowing, apathy, poor attention and executive function, impaired retrieval rather than storage**, no aphasia, with motor signs. **HIV-associated neurocognitive disorder** affects the basal ganglia and deep white matter; it improves with antiretroviral therapy; check also for opportunistic causes (toxoplasmosis, cryptococcus, PML, syphilis).

- **Agnosia** is failure to recognise objects, faces or sounds despite intact sensory pathways (prosopagnosia for faces, astereognosis for objects by touch); **apraxia** is failure of learned movements despite normal power; **aphasia** is a language disorder.

Alzheimer disease in detail

- Degeneration of the **nucleus basalis of Meynert** with reduced acetylcholine. **Senile plaques (beta-amyloid, hallmark)** and **neurofibrillary tangles (tau)**, starting in the entorhinal cortex and hippocampus. Lewy bodies are alpha-synuclein; Pick bodies tau.
- Genes: early-onset autosomal dominant **APP (chromosome 21)**, **presenilin 1 (14, the commonest)**, **presenilin 2 (1)**; late-onset risk gene **ApoE4 (chromosome 19) raises risk**, ApoE2 protects. **Down syndrome** is a risk factor (extra APP).
- Treatment: **cholinesterase inhibitors** (donepezil, rivastigmine, galantamine) in mild to moderate; **memantine** (NMDA antagonist) in moderate to severe. Newer **anti-amyloid antibodies (lecanemab, FDA 2023; donanemab, FDA 2024)** modestly slow decline in early disease with confirmed amyloid, and need MRI monitoring for amyloid-related imaging abnormalities (ARIA), commoner in ApoE4 carriers; not available in Nepal. Diagnosis is moving to **biomarkers**: amyloid PET, CSF amyloid-beta 42 and tau, and blood **p-tau217** (Alzheimer's Association criteria 2024).

Child psychiatry

Attention deficit hyperactivity disorder

- **DSM-5-TR**: **six or more** symptoms of inattention and/or hyperactivity–impulsivity (**five from age 17**), for **at least six months**, several present **before 12 years**, in **two or more settings** (home, school), with impairment. Presentations: predominantly inattentive (commoner in girls, often missed), predominantly hyperactive–impulsive, combined.
- About **5% of children**; boys two to three times girls; symptoms persist into adulthood in about half (hyperactivity fades first, inattention persists). Highly heritable (about 75%); dopamine and noradrenaline in prefrontal–striatal circuits. Comorbid with oppositional defiant and conduct disorder, learning disorders, tics and anxiety.
- **Treatment**: under five, **parent training** first. From five (NICE 2018): **methylphenidate first line** (blocks dopamine and noradrenaline reuptake), then **lisdexamfetamine** or dexamfetamine; non-stimulants **atomoxetine** (noradrenaline reuptake inhibitor; liver injury and suicidal-thought warnings), **guanfacine and clonidine** (alpha-2 agonists). Stimulant adverse effects: **reduced appetite and weight, insomnia, slowed growth** (monitor height and weight), raised pulse and blood pressure, irritability; tics are no longer a contraindication. Drug holidays are an option for growth.

Disruptive behaviour disorders

	Oppositional defiant disorder	Conduct disorder
Core	Angry or irritable mood, argumentative and defiant, vindictive	Violates others' basic rights and major social rules
Criteria	Four or more symptoms for **six months**	Three or more of 15 in **12 months** (one in the last six): aggression to people or animals, destruction of property (fire-setting), deceit or theft, serious rule-breaking (truancy, running away)
Aggression to people or animals	No	Yes
Course	May progress to conduct disorder	**Childhood onset (before 10) has the worst outlook**; a precursor of **antisocial personality disorder** (which needs it before 15)

- Specifier **with limited prosocial emotions** (callous–unemotional traits) marks the most persistent form. Treatment: **parent management training**, multisystemic therapy; no drug for the core problem.
- **Disruptive mood dysregulation disorder** (DSM-5-TR, among depressive disorders): severe temper outbursts **three or more times a week**, irritable mood between them, for **12 months**, onset **before 10**, diagnosed only **between 6 and 18**; created to curb over-diagnosis of childhood bipolar disorder.

Autism spectrum disorder

- Single spectrum in DSM-5-TR and ICD-11, with **two domains: persistent deficits in social communication and interaction, and restricted, repetitive behaviour, interests or activities** (including sensory over- or under-reactivity), present from early development. DSM-5 merged autistic disorder, Asperger disorder, childhood disintegrative disorder (Heller: regression after at least two years of normal development) and PDD-NOS into it; specifiers for intellectual disability, language impairment, catatonia and a known genetic condition; three severity levels by support needed.
- **Rett syndrome** was removed from the autism group: a **MECP2** mutation (X-linked dominant, almost only girls), normal development to 6 to 18 months, then **loss of purposeful hand use with hand-wringing, deceleration of head growth (acquired microcephaly)**, breathing irregularities, seizures.
- Boys about **four times** girls (3.4 in CDC's 2025 report); prevalence about **1 in 31 eight-year-olds** at the US monitoring sites (CDC ADDM, 2025 report, 2022 data), much higher than once thought, mostly from wider criteria and better identification. About **40%** of those identified have intellectual disability, and 20 to 30% develop epilepsy. **Theory of mind** deficit is the classic cognitive model. **No link with MMR vaccine** (the 1998 claim was retracted).
- **Red flags**: no babbling or pointing by 12 months, no single words by 16 months, no two-word phrases by 24 months, **any loss of language or social skills at any age**. Screen with **M-CHAT-R/F at 18 and 24 months** (AAP).
- Treatment: early intensive behavioural and educational therapy (applied behaviour analysis), speech and occupational therapy; **risperidone or aripiprazole for**

irritability and aggression, not for the core features; melatonin for sleep.

Intellectual disability (ICD-11: disorder of intellectual development)

- Onset in the developmental period, with deficits in intellectual and adaptive function. **IQ** = mental age ÷ chronological age × 100 (mean 100, SD 15); the cut-off is about **two SD below the mean (IQ about 70)**. Prevalence about 1 to 2%.

ICD-10 grade	IQ	Adult mental age	Share
Mild	50–69	9 to under 12 years	About 85%, commonest; often recognised only at school; can live and work independently
Moderate	35–49	6 to under 9	About 10%; trainable, self-care with supervision
Severe	20–34	3 to under 6	3 to 4%; basic self-care only
Profound	Below 20	Under 3	1 to 2%; constant care

- The IQ bands are **ICD-10's**, as the exam expects; **ICD-11 grades by standard deviations** of both intellectual and adaptive function (mild 2 to 3 SD below the mean, moderate 3 to 4, severe and profound over 4, told apart by adaptive behaviour), and **DSM-5-TR grades severity by adaptive function, not IQ**. Older terms moron, imbecile and idiot are no longer used.
- **Causes**: **Down syndrome is the commonest genetic cause**; **fragile X syndrome the commonest inherited cause** (FMR1 CGG repeat over 200, Xq27.3: long face, large ears, **macroorchidism**, autistic features); **iodine deficiency the commonest preventable cause worldwide**; also fetal alcohol syndrome, phenylketonuria and congenital hypothyroidism (both detected by newborn screening), perinatal hypoxia, infections. In about half no cause is found. Behavioural phenotypes: **Prader–Willi** (hyperphagia, skin-picking), **Lesch–Nyhan** (self-mutilation), **Williams** (overfriendly, hypersociable), **Angelman** (happy, laughing, ataxic), **Smith–Magenis** (self-injury, inverted melatonin rhythm).

Tic disorders

- **Provisional tic disorder**: under one year. **Persistent (chronic) motor or vocal tic disorder**: one type only, one year or more. **Tourette syndrome**: multiple motor and **one or more vocal tics** for **a year or more**, onset **before 18** (usually 5 to 7 years), boys three to four times girls; tics wax and wane, can be briefly suppressed, and often improve in adolescence. **Coprolalia occurs in only about 10 to 15%**. Comorbid **ADHD (about half) and OCD**.
- Treatment: explanation first; **comprehensive behavioural intervention for tics (CBIT) or habit reversal** is first line now; drugs for impairing tics: **haloperidol and pimozide were the classic drugs of choice** (the exam answer); current practice (AAN 2019, ESSTS 2021) prefers **aripiprazole** or **clonidine and guanfacine** (especially with ADHD), with risperidone and tetrabenazine as alternatives.

Elimination disorders

- **Enuresis**: repeated voiding into bed or clothes, twice a week for three months, from a **chronological or developmental age of 5**. Primary (never dry, about 80%, strongly familial) or secondary (after six months dry: look for stress, urinary infection, diabetes, constipation). Nocturnal enuresis falls by about 15% a year without treatment. Treatment: reassurance, fluids and toileting; **the enuresis alarm is the most effective long-term treatment** (lowest relapse); **desmopressin** acts quickly (camps, short-term), but relapse is common after stopping; **imipramine** was the classic drug and is now third line (cardiotoxic in overdose).
- **Encopresis**: passing faeces in inappropriate places from an age of **4**, once a month for three months; usually with **constipation and overflow**; treat the constipation (disimpaction, laxatives) with behavioural toileting.

Other disorders and durations

- **Separation anxiety disorder**: the commonest anxiety disorder in children under 12; **four weeks** in children, six months in adults; often presents as **school refusal** (the child stays at home with the parent's knowledge, unlike truancy, which is conduct disorder). Treat by early return to school with CBT.
- **Selective mutism**: one month (not the first month of school). **Specific learning disorder**: six months despite targeted help; **dyslexia** (reading) is the commonest. **Childhood-onset fluency disorder** (stuttering). **Pica**: eating non-food for one month beyond age 2 (iron deficiency, pregnancy, intellectual disability; lead poisoning). **Reactive attachment disorder** and **disinhibited social engagement disorder** follow severe neglect.
- Child abuse and neglect are covered in Forensic Medicine and Paediatrics; suspect it when the injury and the story do not match.

Psychopharmacology

Antipsychotics

Class	Examples	Key points
Typical, low potency	Chlorpromazine, thioridazine	Anticholinergic, antihistaminic, alpha-blocking effects; sedation, hypotension; **chlorpromazine: corneal and lens deposits; thioridazine: retinal pigmentation, QT**
Typical, high potency	Haloperidol, fluphenazine, trifluoperazine, pimozide	**Extrapyramidal effects**
Atypical	Clozapine, olanzapine, risperidone, quetiapine, aripiprazole, lurasidone, ziprasidone	5-HT2A and D2 blockade, fewer extrapyramidal effects

- **Risperidone**: most extrapyramidal effects and **hyperprolactinaemia** among atypicals. **Olanzapine**: weight gain, diabetes, antiemetic. **Quetiapine**: sedation, cataract (older warning). **Ziprasidone**: QT prolongation. **Aripiprazole**: D2 partial agonist, little prolactin or weight effect, akathisia. **Clozapine**: **the only antipsychotic licensed to reduce suicidal behaviour** (InterSePT trial; FDA 2002) and the drug for treatment-resistant schizophrenia; **agranulocytosis (about 0.8%, idiosyncratic, not dose-related, mostly in the first 18 weeks)**, needing **neutrophil count monitoring**: in the UK weekly for 18 weeks, fortnightly to a year, then monthly; in the US weekly for six months, fortnightly for six months, then monthly (the FDA ended the mandatory REMS registry in 2025 but still advises the monitoring). Also **myocarditis** (first four to eight weeks; check troponin and CRP), dose-related **seizures**, **hypersalivation** (nocturnal), **constipation progressing to ileus** (a leading cause of clozapine deaths),

maximal weight gain and diabetes; stopping it abruptly risks **rebound psychosis and cholinergic rebound**. Smoking induces CYP1A2 and lowers levels; stopping smoking raises them.

- **Extrapyramidal syndromes** in order of onset: **acute dystonia** (hours to days, young men, oculogyric crisis, torticollis; an intramuscular anticholinergic such as benztropine or procyclidine, or promethazine); **akathisia** (days to weeks; inner restlessness, cannot sit still, tone normal; **propranolol**, or a benzodiazepine, or lower the dose; mirtazapine low dose is a newer option); **parkinsonism** (weeks; an anticholinergic or switch); **tardive dyskinesia** (months to years; orofacial chewing and tongue movements, choreoathetosis; older women, long exposure; attributed to **D2 receptor supersensitivity**). TD: anticholinergics **worsen** it; the classic advice is to stop the anticholinergic, lower the dose or **switch to clozapine**, with tetrabenazine; current practice adds the VMAT2 inhibitors **valbenazine and deutetrabenazine** (FDA 2017, the first licensed treatments). **Neuroleptic malignant syndrome** can occur at any time, usually in the first two weeks or after a dose rise.
- **Neuroleptic malignant syndrome**: develops **over days** after dopamine antagonists, **lead-pipe rigidity**, bradyreflexia, fever, autonomic instability, **raised creatine kinase**, leucocytosis. Treat by stopping the drug, cooling, fluids, benzodiazepines, **dantrolene**, **bromocriptine** (or amantadine), ECT if resistant; mortality about 5 to 10% now; risk factors are high-potency drugs, rapid dose increase, depot injections and dehydration.
- **Metabolic monitoring** on any antipsychotic: weight, waist, blood pressure, glucose or HbA1c, lipids at baseline, 12 weeks and yearly; **olanzapine and clozapine** cause most weight gain, **aripiprazole, lurasidone and ziprasidone** least.
- **Hyperprolactinaemia** (tuberoinfundibular blockade): galactorrhoea, amenorrhoea, sexual dysfunction, osteoporosis.

Antidepressants

Class	Examples	Points
SSRIs	Fluoxetine, sertraline, escitalopram, citalopram, paroxetine, fluvoxamine	First line; GI upset, sexual dysfunction, hyponatraemia (SIADH, elderly), bleeding (with NSAIDs or anticoagulants); **paroxetine** has the worst discontinuation syndrome and first-trimester cardiac defects; **fluoxetine** the longest half-life (norfluoxetine, days), least discontinuation, the SSRI for children and adolescents; **citalopram and escitalopram** prolong QT; **sertraline** after myocardial infarction and in breastfeeding; a warning of suicidal thoughts in under-25s
SNRIs	Venlafaxine, duloxetine	Hypertension (venlafaxine); neuropathic pain
Tricyclics	Amitriptyline, imipramine, clomipramine	Anticholinergic effects, orthostatic hypotension, **cardiotoxicity in overdose**
MAOIs	Phenelzine, tranylcypromine, selegiline; moclobemide (reversible MAO-A, little tyramine risk)	Atypical depression; **tyramine hypertensive crisis** ("cheese reaction": aged cheese, cured meats, wine), treated with phentolamine; **two weeks** off an irreversible MAOI before a serotonergic drug, and **five weeks off fluoxetine** before an MAOI
Others	Mirtazapine (weight gain, sedation), bupropion (seizures), trazodone, agomelatine, vortioxetine	Bupropion and mirtazapine cause little sexual dysfunction

- **Tricyclic overdose**: **fast sodium channel blockade** widens the QRS and causes ventricular arrhythmias, plus anticholinergic effects and hypotension. Treat with **intravenous sodium bicarbonate**.
- **Cardiac choice**: tricyclics slow conduction and prolong QRS and QTc, so avoid them after myocardial infarction or with a prolonged QT; **sertraline** has the best safety evidence in coronary disease (SADHART trial). Citalopram and escitalopram also prolong QT in a dose-dependent way.
- **Pregnancy**: exam answer, a high-potency first-generation antipsychotic such as **haloperidol** has the longest safety record and is the usual choice for acute agitation or mania. Current practice (NICE CG192, updated 2020; BAP 2017): no antipsychotic is clearly safest; quetiapine, olanzapine and aripiprazole have reassuring registry data, so a woman well on one usually continues it (olanzapine and quetiapine raise the risk of gestational diabetes). Valproate and carbamazepine are teratogenic; lithium carries a small cardiac risk with first-trimester exposure (Patorno, NEJM 2017) and may be continued with level monitoring when the relapse risk is high.
- **Serotonin syndrome**: **onset within hours** of adding a serotonergic drug (SSRI with tramadol, linezolid, MAOI, triptan, St John's wort); agitation, **clonus, hyperreflexia**, tremor, diarrhoea, sweating, **fever**, mydriasis. Treat: stop the drug, benzodiazepines, **cyproheptadine**, cooling. Resolves in about a day.

	Serotonin syndrome	Neuroleptic malignant syndrome
Onset	Hours	Days
Tone	Hypertonia (more in the legs), **clonus**	**Lead-pipe rigidity**
Reflexes	Hyperreflexia	Bradyreflexia
Bowel	Diarrhoea, hyperactive	Reduced
Resolves	About a day	Days to weeks

Mood stabilisers

- **Lithium**: near 100% oral bioavailability, no protein binding or hepatic metabolism, narrow therapeutic index, **level 0.6 to 1.0 mmol/L for maintenance (0.8 to 1.2 in acute mania)**, toxic above 1.5, severe above 2.5; level taken **12 hours after the last dose**, five to seven days after each change; **first step in suspected toxicity is a serum level**. Acts through **inositol monophosphatase inhibition** (inositol depletion) and **GSK-3 inhibition**. Before starting: renal function, thyroid function, calcium, ECG if cardiac risk, pregnancy test; then **level, renal and thyroid function every six months** (and calcium yearly). Excreted by the kidney with sodium: **thiazides, NSAIDs, ACE inhibitors and ARBs, dehydration and low sodium raise levels**; **hydrochlorothiazide is the classic culprit**.
- Side effects: fine tremor, polyuria and **nephrogenic diabetes insipidus**, **hypothyroidism** (commoner in women) and goitre, **hyperparathyroidism with hypercalcaemia**, chronic kidney disease with long use, weight gain, acne and psoriasis flares,

leucocytosis, benign T-wave flattening, sinus node dysfunction; toxicity gives coarse tremor, ataxia, dysarthria, vomiting and diarrhoea, confusion, seizures. **Ebstein anomaly** with first-trimester use is the exam answer; current data (2017 cohort, NEJM) show a smaller risk than once feared (cardiac malformations about 1.6 times baseline; Ebstein about 1 in 1,000 to 2,000), so lithium may be continued in pregnancy when the relapse risk is high, with a fetal echocardiogram. **Lithium does not cause SIADH**; it is used in SIADH. Used for mania, bipolar prophylaxis, augmentation of antidepressants, cluster headache and neutropenia. Treat toxicity with fluids and haemodialysis when severe.

- **Nephrogenic DI from lithium**: **amiloride** (blocks the epithelial sodium channel through which lithium enters collecting-duct cells); desmopressin fails.
- **Valproate**: **neural tube defects** (about 10% major malformations) and **lower IQ and autism** in the child: not used in girls and women who could become pregnant unless no alternative works and a pregnancy prevention programme is in place (MHRA 2018, tightened 2024), hepatotoxicity, pancreatitis, tremor, weight gain, thrombocytopenia, polycystic ovary-like changes. **Carbamazepine**: enzyme inducer, hyponatraemia, agranulocytosis, Stevens–Johnson syndrome (HLA-B*1502 in Asian patients; test before use). **Lamotrigine**: rash, Stevens–Johnson syndrome, so titrate slowly; best for bipolar depression.

Benzodiazepines and others

- Benzodiazepines: GABA-A positive allosteric modulators that **increase the frequency** of chloride channel opening (barbiturates increase its duration); dependence, falls, cognitive impairment in the elderly, respiratory depression with opioids or alcohol; **flumazenil** reverses (can precipitate seizures in dependent patients). Short-acting (alprazolam, lorazepam) give more rebound and dependence; long-acting (diazepam, chlordiazepoxide, clonazepam) suit withdrawal regimens. **Buspirone**: 5-HT1A partial agonist, no dependence, delayed benefit. Z-drugs (zolpidem) for insomnia, short term.
- **Antidepressant discontinuation**: taper gradually.

ECT and suicide risk

Electroconvulsive therapy

- **Indications**: **severe depression with suicidal risk, food or fluid refusal, psychomotor retardation or mood-congruent psychosis**; resistant depression; catatonia; severe or resistant mania; schizophrenia resistant to drugs; when a fast response is needed (pregnancy, the frail). **The most important indication is suicidal risk.** ECT acts fastest, with the highest response rates in psychotic depression.
- **Procedure**: brief general anaesthesia (**methohexital** the classic agent; propofol, etomidate or ketamine also used) with **suxamethonium** as the muscle relaxant and atropine or glycopyrrolate against vagal bradycardia, oxygenation, and a generalised seizure of adequate length (classically **at least 25 seconds on EEG**, about 20 seconds of motor activity); bitemporal (faster, more cognitive effects), right unilateral (fewer cognitive effects) or bifrontal placement; usually **6 to 12 sessions, two or three a week**. Ultra-brief pulse stimulation causes fewer cognitive effects. **Modified ECT** (under anaesthesia and relaxation) is the only acceptable form; unmodified ECT is unethical.
- Mechanism: raised monoamine sensitivity, neurotrophic effects (BDNF), and the seizure itself (anticonvulsant effect: the seizure threshold rises during a course).
- **Side effects**: **memory disturbance, anterograde and retrograde (commonest), recovering over weeks to months**, headache, muscle ache, confusion, transient arrhythmia. **Exam answer: the only absolute contraindication is raised intracranial pressure** (a space-occupying lesion). **Current practice** (APA Task Force on ECT, 2001, and later reviews): **no absolute contraindications**, only high-risk states weighed against the illness: raised intracranial pressure, recent myocardial infarction or stroke (within about three months), unstable aneurysm or vascular malformation, phaeochromocytoma, retinal detachment, high anaesthetic risk. **Pregnancy, old age and a pacemaker are not contraindications**; ECT is safe in all three trimesters.
- **Maintenance** with continuation ECT or drugs after the course; relapse is high without it. Informed written consent is needed, or the legal provision for incapacity under Nepal's own law.
- **Other brain stimulation**: **repetitive transcranial magnetic stimulation** (no anaesthesia, no seizure; resistant depression, FDA 2008), **vagus nerve stimulation**, **deep brain stimulation** (resistant OCD, investigational for depression).

Suicide

- A **previous suicide attempt is the strongest single predictor** of eventual suicide (about 1 to 2% die by suicide within a year of an attempt, and the risk is highest in the first months).
- **Durkheim's** sociological types: **egoistic** (poor social integration), **altruistic** (excessive integration, for the group), **anomic** (sudden loss of social norms, economic upheaval), **fatalistic** (excessive regulation). Neurobiology: **low CSF 5-HIAA** (serotonin metabolite) in violent suicide.
- Other risk factors: male sex, older age (and young adults), mood disorder (**depression is the commonest cause**), alcohol misuse, schizophrenia, hopelessness, social isolation, chronic illness, firearm or pesticide access, family history, recent discharge from hospital, borderline personality disorder.
- **Gender paradox**: **women attempt more; men die more** (worldwide about twice the rate in men), because men use more lethal methods.
- **Worldwide** (WHO 2021): about **700,000 deaths a year**; the commonest methods are **pesticide ingestion, hanging and firearms** (firearms commonest in the US); suicide is among the leading causes of death at 15 to 29 years. **Restricting access to highly hazardous pesticides** is one of WHO's most effective prevention measures (LIVE LIFE, 2021).
- **Nepal**: in Nepal Police records **hanging is the commonest method of suicide death**: about **75% of recorded suicides in 2019, rising to 85% in 2023**, with **poisoning second** (about 23% falling to 13%) (Bhandari and others, Mental Illness 2024, analysing 33,000 police-recorded suicides 2019–2023; 59% male). **Among attempts that reach hospital, poisoning (mostly organophosphate and other pesticides) is the commonest**, in single-centre studies. Suicide is reported as the **leading cause of death among Nepali women of reproductive age** (about 16% of their deaths; Hagaman, Maharjan and Kohrt, Int J Ment Health Syst 2016, from national maternal mortality data). Nepal's Criminal Code 2074, **section 185, makes abetting suicide an offence** (up to five years' imprisonment and a fine).
- **Warning signs**: a plan, a suicide note, giving away possessions, sudden calm after depression (starting

antidepressant treatment: energy returns before mood). Ask directly; **asking about suicide does not raise the risk**. Scales: SAD PERSONS (teaching only), Columbia Suicide Severity Rating Scale; scales do not predict well and NICE 2022 advises against relying on them. **Management**: assess risk, remove means, safety plan, admit if high risk, treat the underlying illness; **lithium and clozapine reduce suicidal behaviour**; ketamine and esketamine give a rapid but temporary effect.

Sleep and its disorders

Normal sleep (EEG)

State	EEG and features
Awake, eyes open	**Beta**, over 13 Hz, low voltage
Awake, eyes closed, relaxed	**Alpha**, 8–13 Hz, over the occipital region
Stage N1 (about 5%)	**Theta**, 4–7 Hz; **vertex sharp waves**, slow rolling eye movements, hypnic jerks
Stage N2 (about 45–55%, the commonest)	**Sleep spindles (12–14 Hz) and K complexes** on a theta background
Stage N3 (about 15–20%; old stages 3 and 4)	Slow **delta** waves (under 4 Hz, high amplitude) in at least 20% of the epoch; deepest sleep, hardest to wake; **growth hormone** peaks
REM (about 20–25%)	Low-voltage mixed fast activity like wakefulness ("paradoxical sleep"), **sawtooth waves**, PGO spikes, rapid eye movements, **atonia** of skeletal muscle (diaphragm and eye muscles spared), vivid dreams, **penile and clitoral tumescence**, variable pulse and breathing, poor temperature control

- **Architecture**: four to six cycles of **about 90 minutes**; **first REM about 90 minutes after sleep onset**; **N3 is concentrated in the first third** of the night, REM periods lengthen towards morning. Newborns sleep 16 to 18 hours, **about half in REM** (entering it directly); with age N3 falls most (little left after 60), awakenings increase and the phase advances (early to bed, early waking).
- **Control**: wakefulness from **orexin (hypocretin) neurones of the lateral hypothalamus**, histamine (tuberomammillary nucleus), noradrenaline (locus coeruleus), serotonin (raphe), acetylcholine; sleep from the GABAergic **ventrolateral preoptic nucleus** and accumulating **adenosine** (caffeine blocks it). REM is switched on by **cholinergic** pontine neurones and off by noradrenaline and serotonin. The **suprachiasmatic nucleus** is the circadian clock; **melatonin** from the pineal rises in darkness.
- **Drugs and sleep**: **benzodiazepines** shorten sleep latency, increase N2 and **reduce N3** (and slightly REM); **alcohol** shortens latency and suppresses REM early, then fragments sleep with **REM rebound**; **most antidepressants (SSRIs, tricyclics, MAOIs most) suppress REM** and lengthen REM latency, with REM rebound on stopping; mirtazapine and trazodone are sedating; stimulants and caffeine lengthen latency.
- **Depression**: **sleep latency prolonged** (difficulty falling asleep), **reduced REM latency** (the classic biological marker), **increased REM density** and more REM early in the night, **reduced N3**, **early-morning waking**; sleep deprivation gives a brief antidepressant effect. Mania: reduced need for sleep.
- Sleep stages of other events: **bruxism mainly N2** (and N1); **sleepwalking and night terrors N3**; enuresis can occur in any stage (classically N3); sleep talking in any stage; **head banging (jactatio capitis nocturna) at sleep onset**.

Insomnia

- **Insomnia disorder** (DSM-5-TR): difficulty starting or keeping sleep, or early waking, **three nights a week for three months**, with daytime impairment. The commonest sleep complaint; women and older people.
- **CBT for insomnia (CBT-I) is first line** (American College of Physicians 2016, AASM 2021): sleep restriction, stimulus control, sleep hygiene, cognitive therapy, relaxation. Drugs short term: **z-drugs** (zolpidem, zopiclone, eszopiclone; complex sleep behaviours warning, FDA 2019), **orexin receptor antagonists** (suvorexant 2014, lemborexant, daridorexant 2022; little dependence), low-dose doxepin, **prolonged-release melatonin** over 55 (UK). Avoid long-term benzodiazepines in the elderly (falls, cognition; Beers criteria).

Hypersomnolence and narcolepsy

- **Narcolepsy tetrad**: **excessive daytime sleepiness** (the first and constant symptom), **cataplexy** (sudden bilateral loss of tone with clear consciousness, set off by **laughter** or emotion; the most specific feature), **sleep paralysis**, **hypnagogic and hypnopompic hallucinations**; plus disturbed night sleep. Onset in adolescence.
- **Type 1** (with cataplexy or low orexin) results from **loss of orexin neurones**, probably autoimmune: **HLA-DQB1*06:02** in over 90%, a rise after H1N1 infection and one H1N1 vaccine (Pandemrix, 2009). **Type 2**: no cataplexy, normal orexin.
- **Diagnosis**: overnight polysomnography then **multiple sleep latency test**: mean sleep latency **8 minutes or less** with **two or more sleep-onset REM periods** (ICSD-3); **CSF hypocretin-1 at or below 110 pg/mL** confirms type 1.
- **Treatment**: scheduled naps; **modafinil or armodafinil** (first line for sleepiness), methylphenidate or amphetamines, **pitolisant** (H3 inverse agonist; also helps cataplexy), **solriamfetol**; **sodium oxybate** for cataplexy and sleepiness; REM-suppressing antidepressants (venlafaxine, SSRIs, clomipramine) for cataplexy.
- **Kleine–Levin syndrome**: recurrent episodes of hypersomnia with **hyperphagia, hypersexuality** and behaviour change, normal between episodes; adolescent boys.

Breathing and movement disorders

- **Obstructive sleep apnoea**: snoring, witnessed apnoeas, daytime sleepiness (**Epworth Sleepiness Scale**), obesity and a large neck; screen with STOP-BANG. **Polysomnography is the gold standard** (home testing for uncomplicated adults). **Apnoea–hypopnoea index**: 5 to 14 mild, 15 to 29 moderate, 30 or more severe. Risks: hypertension, atrial fibrillation, stroke, road accidents. **CPAP is the treatment of choice** for moderate to severe; weight loss, positional therapy, mandibular advancement devices, hypoglossal nerve stimulation, and **tirzepatide** (FDA 2024 for OSA with obesity). **Central sleep apnoea** and **Cheyne–Stokes** breathing in heart failure and with opioids.
- **Restless legs syndrome (Willis–Ekbom disease)**: an urge to move the legs with unpleasant sensations, **worse at rest and in the evening, relieved by movement**; 80% have **periodic limb movements** in sleep. Causes: **iron deficiency** (check ferritin), pregnancy, chronic kidney disease, neuropathy; drugs that worsen it: antihistamines, antidopaminergics, most antidepressants. **Exam answer: dopamine agonists** (pramipexole, ropinirole, rotigotine) as drugs of choice.

Current practice (AASM 2024): iron replacement when **ferritin is 75 µg/L or below or transferrin saturation under 20%** (intravenous ferric carboxymaltose strongly recommended); **alpha-2-delta ligands (gabapentin enacarbil, gabapentin, pregabalin) first line**; dopamine agonists now conditionally **against** for standard use because of **augmentation** (symptoms earlier, stronger and spreading).

- **Circadian rhythm disorders**: **delayed sleep phase** (adolescents; timed melatonin in the evening, morning light), advanced sleep phase (elderly; evening light), jet lag (worse travelling east), shift work.

Parasomnias

	Night terror	Nightmare
Timing	**First third of the night**, within hours of falling asleep	Last third of the night
Stage	**Slow-wave N3 non-REM**	**REM**
Behaviour	Screams, autonomic arousal, appears awake but unresponsive, cannot be comforted	Wakes fully, oriented, and can be comforted
Memory	None (amnesia)	Vivid recall
Link	**Sleepwalking**, confusional arousals, family history	Stress, PTSD, REM-suppressant withdrawal

- **Non-REM arousal disorders** (sleepwalking or somnambulism, night terrors or pavor nocturnus, confusional arousals): children, usually outgrown by adolescence; worse with sleep deprivation, fever and stress. Management: reassurance and **safety** (locks, no bunk beds), regular sleep, **scheduled awakening** before the usual time; a benzodiazepine (clonazepam) rarely.
- **REM sleep behaviour disorder**: dream enactment from **loss of REM atonia** (REM sleep without atonia on video polysomnography); older men; **over 70 to 80% develop an alpha-synucleinopathy** (Parkinson disease, Lewy body dementia, multiple system atrophy) over 10 to 15 years; treat with **melatonin or clonazepam** and bedroom safety; antidepressants can provoke it.
- **Sleep paralysis**: REM atonia persisting on waking; in healthy people and narcolepsy.
- ICD-11 puts sleep–wake disorders in a **separate chapter** (7), outside mental disorders; DSM-5-TR keeps them, and the specialist classification is ICSD-3.

Eating disorders

Anorexia nervosa versus bulimia nervosa

Feature	Anorexia nervosa	Bulimia nervosa
Weight	**Significantly low**: DSM-5-TR severity by adult BMI (mild 17 or more, moderate 16–16.99, severe 15–15.99, **extreme under 15**); **ICD-11: BMI under 18.5** (dangerously low under 14); ICD-10: **17.5 or less, or 15% below expected**	Normal or fluctuating, often slightly above normal
Core	Restriction of intake, intense fear of gaining weight (or persistent behaviour preventing gain), disturbed body image	Recurrent binges (large amounts with loss of control) with compensation (vomiting, laxatives, diuretics, fasting, exercise) **at least once a week for three months** (DSM-IV: twice a week); self-worth unduly tied to shape and weight
Subtypes	**Restricting**; **binge-eating/purging**	(DSM-IV purging and non-purging dropped)
Amenorrhoea	**Very common**, hypothalamic; required in ICD-10 and DSM-IV, **dropped in DSM-5**	Menstrual irregularity common; amenorrhoea uncommon
Examination	Emaciation, **lanugo**, **bradycardia, hypotension, hypothermia**, dry yellowish skin (**hypercarotenaemia**), peripheral oedema, cold extremities, osteoporosis, excessive exercise	**Dental erosion** (lingual surfaces of the upper teeth), **parotid and salivary gland swelling**, **Russell's sign** (calluses on the knuckles from inducing vomiting)
Behaviour	Secretive, perfectionist, obsessional, denies illness	Ashamed, more impulsive; self-harm and substance misuse commoner
Onset and prognosis	Mid-adolescence; **highest mortality of any psychiatric disorder** (about five to six times expected: starvation, arrhythmia, **suicide**); about half recover fully	Late adolescence to early adulthood; better outcome

- Both mainly in **young women** (about 10 : 1, narrowing); risk factors: family history, perfectionism, dieting, occupations valuing thinness (ballet, modelling, athletics). The **female athlete triad** (low energy availability, amenorrhoea, low bone density) overlaps.

Laboratory and endocrine picture

- **Vomiting**: **hypokalaemic, hypochloraemic metabolic alkalosis**, raised serum **amylase** (salivary); **laxative abuse**: metabolic acidosis with hypokalaemia. Hypokalaemia is the commonest dangerous electrolyte disturbance in both.
- **Starvation (anorexia)**: low **LH, FSH and oestradiol** (hypothalamic hypogonadism; a prepubertal LH pattern), **low T3 with normal TSH** (sick euthyroid; do not give thyroxine), **raised cortisol** and **raised growth hormone with low IGF-1**, **hypercholesterolaemia**, hypoglycaemia, **leucopenia** and anaemia, raised liver enzymes, low bone density, delayed gastric emptying. **ECG**: sinus bradycardia, **prolonged QTc**, arrhythmias (risk of sudden death).
- **Medical admission** is needed for instability: for example a heart rate under 40, symptomatic hypotension or syncope, temperature under 35.5 °C, BMI under 13, or a severe electrolyte disturbance (the Royal College of Psychiatrists' MEED guidance, 2022, sets the thresholds).

Refeeding syndrome

- When feeding restarts after starvation, insulin drives phosphate, potassium and magnesium into cells: **hypophosphataemia (the hallmark)**, hypokalaemia, hypomagnesaemia, **thiamine deficiency** (Wernicke), salt and fluid retention, **heart failure, arrhythmia**, seizures; greatest in the **first three to five days**. Prevent with **thiamine before feeding**, electrolyte checks and replacement.

- **Exam answer (NICE CG32)**: start low, at **10 kcal/kg/day** for the high-risk (5 in extreme cases), and build up over four to seven days. **Current practice** (MEED 2022, and studies of higher-calorie refeeding in adolescents): start higher, about **20 kcal/kg/day for the high-risk and 30 to 35 for others**, rising every few days and never below what the patient was eating before admission, with close electrolyte monitoring, since underfeeding prolongs illness and causes its own deaths.

Treatment

- **Anorexia**: weight restoration with psychological therapy. **Family-based therapy (Maudsley) for children and adolescents** is first line (NICE 2017); adults: **CBT-ED**, MANTRA or specialist supportive clinical management. **No drug treats the core of anorexia**; olanzapine gives modest weight gain; SSRIs do not help at low weight. Compulsory treatment may be lawful when life is at risk (Nepal's own law applies).
- **Bulimia**: **CBT for eating disorders** (guided self-help first for adults, NICE 2017), family therapy in adolescents; **fluoxetine 60 mg a day** (higher than the antidepressant dose; the only licensed drug) reduces bingeing and purging. **Bupropion is contraindicated** in bulimia and anorexia (seizures).
- **Binge eating disorder** (DSM-5 and ICD-11, new in both): binges without regular compensation, once a week for three months, with distress; the **commonest eating disorder in adults**, linked with obesity. CBT; **lisdexamfetamine** (FDA 2015).

Other feeding and eating disorders

- **ARFID** (avoidant/restrictive food intake disorder): restriction from lack of interest, sensory aversion or fear of choking or vomiting, **without body-image concern**; children, with weight loss or nutritional deficiency.
- **Pica**: eating non-food substances for **one month** beyond the age of 2 (soil, chalk, ice); with iron deficiency, pregnancy, intellectual disability and autism; risks of **lead poisoning** and worms. **Rumination disorder**: repeated effortless regurgitation and re-chewing for one month.

Personality disorders

Personality disorder: an **enduring, inflexible, pervasive pattern** of inner experience and behaviour that deviates from the culture, begins in **adolescence or early adulthood**, is stable over time and causes distress or impairment; it is not due to another disorder or substance. Personality traits are **ego-syntonic** (the person does not see them as the problem), unlike OCD.

Clusters (DSM-5-TR)

Cluster	Disorders	Mnemonic
A, odd or eccentric	Paranoid, schizoid, schizotypal	"Weird"; related to the schizophrenia spectrum
B, dramatic, emotional, erratic	Antisocial, borderline, histrionic, narcissistic	"Wild"
C, anxious or fearful	**Avoidant, dependent, obsessive-compulsive (anankastic)**	"Worried"

- **Cluster C: avoidant** (social inhibition, feelings of inadequacy and **fear of rejection**, avoiding contact although they want it; contrast schizoid, who does not want it); dependent: needs to be cared for, submissive, cannot decide alone. OCPD: perfectionism, orderliness, rigidity, ego-syntonic (OCD is ego-dystonic).
- **Cluster A:** paranoid (suspicion, projection), schizoid (detached, solitary by choice, indifferent to praise), schizotypal (magical thinking, ideas of reference, odd speech; genetically linked to schizophrenia).
- **Cluster B:** antisocial (age at least 18, **conduct disorder before 15**, disregard for rights, no remorse; commoner in men and in prisons), borderline (unstable relationships, self-image and mood, **recurrent self-harm**, chronic emptiness, fear of abandonment, **splitting**), histrionic (attention-seeking, shifting shallow emotion), narcissistic (grandiosity, need for admiration, lack of empathy).
- **Treatment:** psychotherapy is the mainstay. **Borderline: dialectical behaviour therapy (Linehan), mentalisation-based therapy, schema therapy**; drugs only for symptoms or comorbid illness (NICE: none licensed for the disorder itself). Antisocial: poor response; treat comorbid substance use.
- **ICD-11 (2022)** replaced the types with one diagnosis graded **mild, moderate or severe**, with trait domains (negative affectivity, detachment, dissociality, disinhibition, anankastia) and a borderline pattern specifier. DSM-5-TR kept the ten types and clusters, with a dimensional alternative model in Section III.
- **Defences:** borderline uses splitting and projective identification; paranoid, projection; obsessive-compulsive, isolation, undoing and reaction formation (see Psychopathology).
- **Not a personality disorder:** dissociative identity disorder (multiple personality), and personality change from a brain lesion (frontal-lobe syndrome, called personality change due to another medical condition).

Communication and ethics

Breaking bad news: SPIKES (Baile and colleagues, 2000)

Step	What to do
S: Setting up the interview	**The first step.** Private, unhurried place; sit down; tissues; turn off the phone; decide who should be there; allow the patient to bring a relative
P: Perception	Ask what the patient already knows and understands ("what have you been told so far?")
I: Invitation	Ask how much they want to be told (some prefer a family member to receive details)
K: Knowledge	Give a warning shot, then the news in small chunks in plain language without jargon, and check understanding
E: Emotions	Respond to feelings with empathy (NURSE statements: name, understand, respect, support, explore), allow silence
S: Strategy and summary	Summarise, plan the next steps, check that the patient has understood and offer a follow-up

- **Principles:** truth-telling with compassion; do not lie, do not overwhelm; respect cultural norms (families may ask the doctor to tell them first; the patient's own wish to know takes precedence, but explore that wish gently).
- **Four principles of medical ethics (Beauchamp and Childress): autonomy, beneficence, non-maleficence, justice**. Informed consent needs information, capacity and

voluntariness. **Capacity** is decision-specific: the person can understand, retain, weigh and communicate a choice.

- **Confidentiality** is broken only when the law requires or to prevent serious harm to others; Nepal's law governs mandatory reporting.
- **Empathic skills:** open then closed questions, reflection, clarification, summarising, silence; avoid leading questions and premature reassurance.

Suicide and self-harm

Assessing and asking

- **Ask directly about suicidal thoughts.** The evidence is that **asking does not plant the idea or raise the risk**; it can relieve distress and gives the information needed to decide on care: **ideation, plan, intent, means, past attempts, protective factors and the reasons for living.** It does not by itself prevent suicide.
- Steps: build rapport; ask first about hopelessness, then about wishing to be dead, then thoughts of suicide, then a plan, method and timing; check access to means (pesticides, medicines, ropes, firearms).
- **Risk factors:** previous attempt (the strongest predictor), depression and other mental illness, alcohol and drug misuse, hopelessness, recent loss, chronic or painful illness, social isolation, male sex, older age, family history, impulsivity, recent discharge from hospital, access to means.
- **Protective factors:** family and social support, responsibility for children, religious or cultural beliefs, help-seeking, sound treatment.
- **High-risk signs:** a plan and intent, a note, giving away possessions, sudden calm after distress, psychotic depression, command hallucinations.

Management

- **Safety first:** do not leave a high-risk patient alone; admit (voluntarily, or under the legal provisions that apply) if there is intent, a plan, or psychosis; **safety planning, lethal-means restriction, crisis contact, follow-up soon after discharge** (the first weeks are the highest-risk period; UK practice now aims at contact within 72 hours).
- **Treat the cause:** depression (antidepressant plus psychotherapy, ECT for severe cases with suicidal risk, food refusal or psychosis), **lithium and clozapine reduce suicidal behaviour**; ketamine or esketamine give rapid short-term effect. Antidepressants in the young may raise suicidal ideas in the early weeks, so monitor (boxed warning under 25).
- **Epidemiology and Nepal:** see the Suicide section in ECT and suicide risk. WHO: over 700,000 deaths a year; **restricting highly hazardous pesticides** is among the most effective measures (WHO LIVE LIFE 2021). Nepal's Criminal Code 2074, section 185, forbids abetting suicide or creating the circumstances that drive a person to it.
- **Scales (Columbia Suicide Severity Rating Scale)** structure assessment but do not predict individual risk (NICE 2022).
- **Self-harm:** commonest in young women, often impulsive after an interpersonal stress; it raises later suicide risk (all patients need psychosocial assessment, not just medical treatment). **Paracetamol overdose** needs N-acetylcysteine.

Sources

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