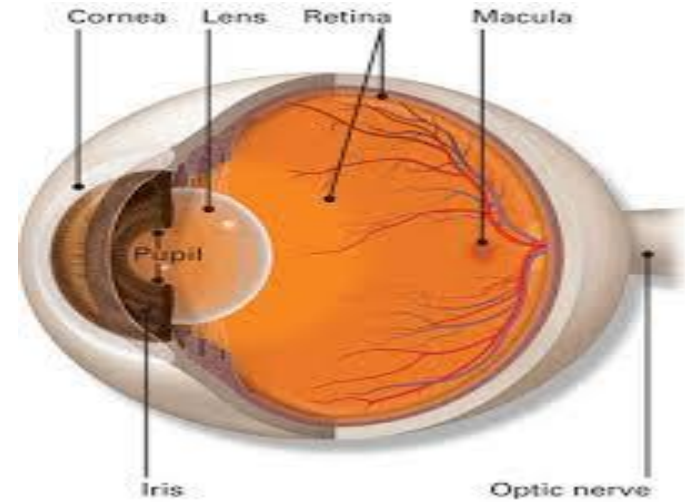


MRCP 1 psychiatry & ophth 13 question



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Psychiatric symptoms

1 Mood / Emotional Symptoms

- **Low mood / sadness / depressed mood** → persistent unhappiness, crying
- **Euphoria / elevated mood** → unusually happy, irritable (seen in mania)
- **Anxiety / worry / fear** → constant nervousness, apprehension
- **Irritability / anger** → easily annoyed or aggressive
- **Tip:** Mood = subjective feeling; **Affect = what you observe.**

2 Thought & Cognitive Symptoms

- **Delusions** → false beliefs (e.g., persecution, grandiosity)
- **Obsessions** → repetitive intrusive thoughts (e.g., contamination)
- **Phobias** → irrational fears of specific objects/situations
- **Racing thoughts / flight of ideas** → rapid, disconnected thinking (mania)
- **Poor concentration / indecisiveness** → common in depression and anxiety

Main symptoms

3 Perceptual Symptoms

- **Hallucinations** → hearing, seeing, smelling, or feeling things that are not there
- **Illusions** → misperceptions of real **external stimuli**

4 Behavioral Symptoms

- **Agitation / restlessness** → pacing, fidgeting, unable to stay still
- **Psychomotor retardation** → slowed movements or speech (depression)
- **Impulsivity / risky behavior** → sudden acts without thinking (mania, borderline PD)
- **Social withdrawal / isolation** → avoiding contact with others

5 Other Common Symptoms

- **Sleep disturbances** → insomnia or hypersomnia
- **Appetite changes** → loss or increase of appetite
- **Somatic symptoms** → physical complaints without clear medical cause
- **Suicidal thoughts / self-harm** → may indicate severe depression or personality disorders

MSE

A. Appearance & Behavior

- Dress, grooming, posture, eye contact, facial expression
- Motor activity: agitation, retardation, tics

B. Speech

- Rate, volume, tone, fluency, coherence , pressured, slurred, poverty of speech

C. Mood & Affect

- Mood = patient's subjective emotional state ("sad," "anxious")
- Affect = observed emotional expression (flat (schizophrenia), blunted, labile **mania** , appropriate/inappropriate)

D. Thought Process & Content

- **Process:** organization of thoughts (logical, tangential, circumstantial, flight of ideas)
- **Content:** delusions, obsessions, suicidal or homicidal ideas, phobias

E. Perception

- Hallucinations: auditory, visual, tactile, olfactory Illusions

MSE

F. Cognition

- Orientation (time, place, person)
- Attention and concentration
- Memory (recent, remote)
- Abstract thinking, calculation

G. Insight & Judgment

- Insight: awareness of illness and need for treatment
- Judgment: ability to make reasonable decisions in daily life

Post traumatic stress syndrome

Definition

- PTSD is a **prolonged psychological response** to a traumatic event such as war, assault, natural disasters, or accidents.

Key Diagnostic Features (MRCP-friendly)

1. Required Trigger

Exposure to actual or threatened:

- Death & Serious injury
- Sexual violence

Exposure may be:

- Direct
- Witnessed
- Learning it happened to a close family member
- Repeated exposure to trauma (e.g., first responders)

Clinical picture

Intrusion Symptoms

- Flashbacks (reliving the event) Nightmares & Distressing memories
- Psychological/physical distress when reminded of trauma

Avoidance

- Avoid thoughts, feelings, conversations about trauma
- Avoid places/people that resemble trauma

Hyperarousal

- Hypervigilance & Irritability/anger
- Insomnia & Exaggerated startle reflex & Poor sleep

Timing

- Symptoms last **>1 month** & If <1 month → *Acute Stress Disorder*

Risk Factors

- Previous psychiatric illness & Poor social support & Severe trauma & Childhood abuse & Genetic predisposition

Management

1. First-line treatment

Trauma-focused CBT

Eye Movement Desensitization & Reprocessing (EMDR)

2. Pharmacotherapy

Used when therapy insufficient or moderate–severe:

- **SSRIs (first-line):** sertraline, paroxetine
- **SNRIs:** venlafaxine
- **Prazosin** → for **nightmares**

NOT recommended:

- Benzodiazepines (worsen prognosis)

- Fluoxetine: Longest half-life (days/weeks). Good for non-compliant patients; less withdrawal .
- Paroxetine: Short half-life. Highest risk of discontinuation syndrome.
- Citalopram: **Associated with QT** prolongation
- .Sertraline: Safest post-MI.
- Escitalopram: Enantiomer of citalopram

SNRI

Drug	Key MRCP Context
<p data-bbox="19 393 289 436">Venlafaxine</p> 	<p data-bbox="782 338 1835 491">The most commonly prescribed SNRI for Major Depression and GAD. Notorious for withdrawal effects.</p>
<p data-bbox="19 764 270 808">Duloxetine</p> 	<p data-bbox="782 709 1835 873">Often the answer for patients with depression + neuropathic pain (e.g., Diabetic Neuropathy) or Stress Urinary Incontinence.</p>

Test your knowledge

A 24-year-old female with a history of **Bipolar I Disorder presents** to the clinic with a recurrence of depressive symptoms. She is currently taking Lithium carbonate. She requests an antidepressant. According to **NICE guidelines**, **Which of the following is the most appropriate initial management step for her depressive episode?**

- A. Prescribe Quetiapine or adjust Lithium dose
- B. Refer for immediate Electroconvulsive Therapy (ECT)
- C. Start Venlafaxine monotherapy
- D. Start Sertraline monotherapy immediately

NICE guidelines recommend **Quetiapine** (an atypical antipsychotic with antidepressant properties) alone, or optimizing the Lithium dose/adding an agent like Lamotrigine, avoiding SSRI monotherapy

Management of bipolar disorders

Acute Mania

- **First-line:** Lithium, Valproate, or an atypical antipsychotic.
- **Combination for severe mania:**
 - Lithium + antipsychotic **OR**
 - Valproate + antipsychotic.

Bipolar Depression : Preferred:

- **Quetiapine**
- **Lurasidone** (alone or with lithium/valproate)
- **Lamotrigine**
- **Lithium**

Maintenance / Long-Term

- **Lithium** (gold standard) & Valproate
- Lamotrigine
- Atypical antipsychotics (Quetiapine, Olanzapine, Aripiprazole)

Alcohol withdrawal

Alcohol Withdrawal Timeline (Examinable)

- **6-12 hours:** Tremor, anxiety, tachycardia, nausea.
- **36 hours:** Withdrawal seizures (**Generalized tonic-clonic**).
- **48-72 hours:** **Delirium Tremens** (Medical emergency).

Features: Clouding of consciousness, visual/tactile hallucinations (formication (insects on skin), autonomic overactivity.

Treatment : **Chlordiazepoxide** (**Lorazepam if liver failure**). (**librax or Librium**)

Wernicke's Encephalopathy: (Thiamine B1 deficiency).

Triad: Confusion, Ataxia, Ophthalmoplegia (nystagmus/lateral rectus palsy)

Rx: IV Pabrinex (B1) BEFORE Glucose (Glucose first precipitates Wernicke's).

Korsakoff's Psychosis: Irreversible. Anterograde amnesia + Confabulation (**fills the gap with invented stories** .

Eating disorders

1. Anorexia Nervosa

- Intense fear of **gaining weight & Distorted body image**
- Very low BMI (**<17.5**)
- Amenorrhea (may be absent in DSM-5 but still tested)
- Lanugo hair
- Bradycardia, hypotension & Hypokalemia
- Osteoporosis risk
- Excessive exercise or dietary restriction & May involve purging (vomiting/laxatives)

Complications:

- Arrhythmias (due to low K^+)
- Refeeding syndrome



Bulimia Nervosa

- Normal or **slightly overweight BMI**
- Recurrent **binge eating**
- Compensatory behavior: vomiting, laxatives, fasting, excessive exercise
- Parotid gland enlargement & Russell's sign (knuckle scars)
- Erosion of dental enamel
- Metabolic alkalosis (vomiting)
- Hypokalemia

Binge-Eating Disorder : = النهيم

- Recurrent binge episodes
- No compensatory behavior (no purging)
- Leads to obesity & Feeling of loss of control during episodes
- Guilt or shame after eating



Bulimia Nervosa

Core Idea

- Bulimia = **binges + compensation**
The person eats a **large amount of food quickly**, feels **loss of control**, then tries to **undo the calories** by:
- Vomiting & Laxatives & excessive exercise & fasting

Why does it happen?

The cycle happens because:

- Stress → binge → guilt → purging → temporary relief → stress again
This becomes addictive

What the body shows

- Normal or slightly overweight (unlike anorexia) & Dehydration & **Metabolic alkalosis** from vomiting
- **Hypokalemia & Swollen parotid glands & Dental enamel erosion**
- **Russell sign** (scars on knuckles)

Eating disorders

Feature	Anorexia nervosa	Bulimia	Binge Eating
BMI	Low	Normal/slightly high	High
Binge episodes	Sometimes	Yes	Yes
Purging	Sometimes	Always (compensation)	No
Electrolytes	Low K ⁺	Low K ⁺	Normal
Acid-base	Metabolic alkalosis (vomiting)	Metabolic alkalosis	Normal
Body signs	Lanugo	Dental erosion, parotid swelling	Obesity
Menstrual issues	Common	Less common	Can be normal

Anxiety disorders

Disorder	Key Feature	Concept
Somatization Disorder	Multiple physical symptoms	Long history of multiple unexplained symptoms across varied systems (GI, Neuro, Gynae).
Hypochondriasis (Illness Anxiety)	Fear of Disease	Patient is convinced they have a serious disease (e.g., Cancer) despite normal tests. Focus is on the diagnosis, not the symptoms.
Conversion Disorder (Dissociative)	Neurological loss	Sudden loss of function (blindness, paralysis) typically after acute stress. "La belle indifférence" (patient unconcerned).
Factitious Disorder (Munchausen's)	Intentional production	Patient fakes symptoms for the "sick role" (internal gain).
Malingering	Intentional production	Patient fakes symptoms for external gain (money, avoiding court/work). Not a psychiatric illness.

Factitious versus malingering

Feature	Factitious Disorder	Malingering
Motivation	Psychological → wants to be sick	External → money, avoiding work, drugs
Awareness	Conscious production of symptoms	Conscious
Symptoms	Often bizarre, inconsistent	Usually plausible
Hospital visits	Frequent, multiple hospitals	Variable

GAD

❑ A chronic condition characterized by **excessive, persistent, and uncontrollable worry** about everyday events for **at least 6 months**

❑ **Clinical features :**

1. Excessive worry

- Worry about multiple areas (health, work, family, finances).
- Difficulty controlling the worry.

2. Physical (somatic) symptoms

- Muscle tension & Trembling
- Fatigue & Restlessness & Headaches ,Sweating
- GI symptoms (diarrhea, abdominal discomfort)

3. Cognitive/psychological symptoms

- Poor concentration & Sleep disturbance (difficulty falling asleep) & Irritability



GAD

◆ Diagnostic Criteria (DSM-5 Simplified)

- Anxiety and worry on **most days for ≥ 6 months**, about several events, plus ≥ 3 symptoms:
- Restlessness & Fatigue
- Poor concentration & Irritability
- Muscle tension & Sleep disturbance
- Must cause **distress or impaired functioning**.

Differential Diagnosis

- Panic disorder (episodic, not continuous)
- OCD (obsessions/compulsions)
- Hyperthyroidism
- Substance-induced anxiety
- PTSD
- Social anxiety disorder

- ✓ مده اكثر من 6 شهور
- ✓ قلق مفرط وصعوبة السيطرة عليه
- ✓ وجود 3 أو أكثر من الأعراض الجسدية/العاطفية مثل:
 - توتر العضلات
 - اضطرابات النوم
 - تعب
 - صعوبة التركيز
 - عصبية
- ليس بسبب اضطراب آخر أو مرض عضوي

Management

1. First-line :

- ❖ **Cognitive Behavioral Therapy (CBT)**
- ❖ Most effective **psychological therapy**.

SSRIs / SNRIs

- **SSRIs:** Sertraline, Escitalopram, Paroxetine
- **SNRIs:** Venlafaxine, Duloxetine
- These are the **main pharmacologic treatment**.

2. Second-line :

- **Buspirone** (non-sedating, no dependence)
- **Pregabalin** (effective for anxiety + insomnia)

3. Short-term symptomatic relief

- **Benzodiazepines**
- Used for **acute severe anxiety only** & Not long-term (dependence, tolerance)
- Examples: Lorazepam, Diazepam.

Post partum psychiatric disorders

Condition	Onset	Features	Management
Baby Blues	Day 3-7	Tearfulness, irritability. Very common (>50%).	Reassurance (Self-limiting).
Postnatal Depression	Month 1-3	Standard depressive symptoms.	CBT, SSRIs (Sertraline/Paroxetine are safer in breastfeeding).
Puerperal Psychosis	Day 7-14	Rapid onset mania, confusion, delusions.	Psychiatric Emergency. Admission (Mother & Baby unit). Antipsychotics/Mood stabilizers.

Generalized anxiety disorders

GAD

- Worry about *everything*
- ≥ 6 months
- Physical tension symptoms dominate

Panic Disorder

- **Sudden episodes**, peak in 10 minutes
- Fear of **dying, choking, losing control**
- Often develops **anticipatory anxiety**

Social Anxiety Disorder

- Anxiety only in **social/performance** situations
- Fear of embarrassment
- **β -blockers** useful for performance anxiety

Test your knowledge

1. A 28-year-old woman reports *constant worry* about her job, family, finances, and health for the past 8 months. She complains of muscle tension and difficulty sleeping.

Best first-line treatment?

- A. Lorazepam
- B. Buspirone
- C. Sertraline
- D. Propranolol

2. A 32-year-old man presents with sudden episodes of intense fear, palpitations, chest tightness, and a feeling he is going to die. The episodes **peak within 10 minutes** and then resolve.

Most likely diagnosis?

- A. Generalized anxiety disorder
- B. Panic disorder
- C. Social anxiety
- D. Agoraphobia

Feature	Panic Attack (Episodic)	Anxiety (Generalized / Persistent)
Onset	Sudden, peaks within 10 minutes	Gradual, develops over time
Duration	Short: 10–30 min (rarely up to 1 hr)	Long-lasting: weeks to months
Trigger	Often unexpected , may be situational	Usually chronic worry , about future events

Test

3. A patient with panic disorder begins avoiding public transport because he fears he cannot escape during an attack.

What complication is developing?

- A. PTSD
- B. GAD
- C. Agoraphobia
- D. OCD

Personality disorders

Personality disorders = enduring, inflexible maladaptive patterns of behavior, cognition, and inner experience beginning in adolescence/early adulthood.

❖ If the problem is **lifelong, stable, inflexible, and causes social/work impairment**, think **PERSONALITY DISORDER**, not mood disorder.

They are classified into **3 clusters**:

Cluster A (Odd / Eccentric)

- Linked with **schizophrenia spectrum**

1. **Paranoid Personality Disorder**. شخص شايف إن الناس كلها ضده أو عايزة تأذيه بدون دليل واضح.

- Distrustful, suspicious & Reads hidden meanings, holds grudges

- NOT full delusions (unlike schizophrenia)

2. **Schizoid Personality Disorder**. شخص منعزل تمامًا، ومش مهتم بالعلاقات ولا التواصل العاطفي.

- Prefers to be **alone**

- Emotionally cold, detached

- No desire for close relationships

Clusters of personality disorders

3. Schizotypal Personality Disorder

- Odd beliefs, magical thinking
- Social anxiety
- Strange speech/behavior
- Mild version of schizophrenia (**no psychosis**)

Cluster B

◆ Cluster B (Dramatic / Emotional / Erratic) Big emotion

1. **Borderline Personality Disorder** : شخص مشاعره تتقلب بسرعة وعلاقاته مش ثابتة، ويخاف من الهجر

- Instability in emotions, relationships, self-image
- Impulsive, self-harm, suicidal threats
- Splitting (idealise / devalue)
- Treatment: **DBT psychotherapy**

2. **Antisocial Personality Disorder** : ما يخفش من القانون وما يحسش بالذنب

- Violates rights of others
- Deceitful, aggressive
- No remorse
- Must be **>18 years old** with history of conduct disorder

Cluster B

3. Histrionic Personality Disorder : "عايز الناس تركز عليه طول الوقت"

- Attention-seeking
- Overly emotional, dramatic
- Seductive behavior
- Needs to be the "center of attention"

4. Narcissistic Personality :

شخص شايف نفسه مميز عن الناس ويحتاج الناس تمدحه طول الوقت وما عندوش تعاطف

- Grandiose self-importance
- Lack of empathy
- Needs admiration
- Easily offended

Cluster C

1. Avoidant Personality Disorder

شخص عايز يعمل علاقات لكنه خايف جدًا من الرفض، لذلك يبتعد عن الناس.

- Wants relationships but avoids them
- Fear of criticism, rejection & Low self-esteem
- Like severe social anxiety

2. Dependent Personality Disorder

- Excessive need to be taken care of & Fear of separation
- Difficulty making decisions alone

3. Obsessive-Compulsive Personality Disorder (OCPD)

شخص مهووس بالكمال والنظام والسيطرة على كل التفاصيل.

- Perfectionistic, rigid, controlling
- Preoccupied with rules/order
- **Egocentric** → thinks their behavior is correct
- (Different from OCD: in OCD patient sees thoughts as unwanted)

Feature	OCD	OCPD
Definition	Anxiety disorder characterized by obsessions (intrusive thoughts) and compulsions (rituals to reduce anxiety)	Personality disorder characterized by perfectionism, rigidity, and control , without true obsessions/compulsions
Awareness / Insight	Patients usually recognize their thoughts are irrational (ego-dystonic)	Patients think their behaviors are reasonable and correct (ego-syntonic)
Behavior	Repetitive rituals (handwashing, checking, counting) to relieve anxiety	Excessive orderliness, perfectionism, workaholism, control over others, no ritualistic relief
Onset	Usually childhood or adolescence	Usually early adulthood , lifelong pattern
Impact	Causes significant distress and impairment	May interfere with relationships/work but often don't see it as a problem
Treatment	SSRIs + CBT (exposure and response prevention)	Psychotherapy (often difficult, low motivation for change)

Types of personality disorders

Cluster	Disorder	Very Simple Meaning (1-line)
A (Odd)	Paranoid	Always suspicious; thinks others will harm or deceive them.
	Schizoid	Likes being alone; emotionally cold.
	Schizotypal	Odd, magical beliefs; socially awkward.
B (Dramatic)	Borderline	Very unstable emotions; self-harm; fear of abandonment.
	Antisocial	Breaks rules; lies; no remorse; criminal behavior.
	Histrionic	Dramatic; attention-seeking; overly emotional.
	Narcissistic	Thinks they're superior; needs admiration; no empathy.
C (Anxious)	Avoidant	Wants friends but fears rejection; very shy.
	Dependent	Cannot make decisions; very clingy; fears separation.
	OCPD	Perfectionist, rigid, controlling; thinks their behavior is "correct."

Guess the type

Case:

A 35-year-old man constantly believes his colleagues are trying to sabotage his work. He reads hidden meanings into innocent comments and refuses to share personal information.

- **Key clue:** Lifelong **suspiciousness**, distrust, no psychosis.

Case:

A 28-year-old woman prefers to be alone, has few friends, and shows little interest in social or sexual relationships. She seems emotionally cold and detached.

- **Key clue:** Lifelong **preference for solitude**, emotionally detached.

Case:

A 25-year-old man has repeatedly lied, stolen, and assaulted others since adolescence. He shows no remorse and disregards the law.

- **Key clue:** **Rule-breaking, lack of remorse, history of conduct disorder before age 15.**

Stages of sleep (NREM)

Stage	EEG / Features	Key Characteristics
Stage N1	Theta waves (light sleep)	Transition from wakefulness → sleep; easily awakened
Stage N2	Sleep spindles + K-complexes	Heart rate & body temp drop; 50% of total sleep
Stage N3	Delta waves (slow-wave sleep, deep sleep)	Difficult to awaken; growth hormone release; memory consolidation; sleepwalking/night terrors

REM sleep

Feature	Description
EEG	Low-amplitude, mixed-frequency (like awake)
Muscle tone	Almost complete atonia (muscle paralysis)
Eye movements	Rapid, conjugate eye movements
Autonomic activity	Variable heart rate, BP, breathing; can be irregular
Dreaming	Most vivid dreams occur during REM
Memory function	Important for procedural and emotional memory consolidation

A 40-year-old man regularly gets up during sleep and walks around the house, during this time he is very difficult to arouse and has no recollection of events in the morning.

During which sleep stage does this phenomenon most often occur?

Your answer was incorrect

A	Stage 1 NREM
B	Early stage 2 NREM
C	Late stage 2 NREM
D	Stage 3 NREM
E	Rapid eye movement (REM)

Sleep disorders

Disorder	Key Features / Symptoms	Typical Age / Notes	Management / Treatment
Insomnia	Difficulty falling/staying asleep, early awakening, daytime fatigue	Any age, often adults	Sleep hygiene, CBT, short-term sedatives if needed
Primary Insomnia	No clear cause	Adults	Sleep hygiene, CBT
Secondary Insomnia	Caused by depression, anxiety, medical illness, drugs	Adults	Treat underlying cause + CBT/short-term meds
Hypersomnia	Excessive daytime sleepiness despite adequate night sleep	Adolescents/adults	Stimulants (modafinil), treat underlying cause
Narcolepsy	Daytime sleep attacks, cataplexy, sleep paralysis, hypnagogic hallucinations	Adolescents/young adults	Stimulants, scheduled naps, lifestyle adjustments
Sleep Apnea (OSA)	Snoring, interrupted breathing, daytime sleepiness, obesity	Middle-aged adults	CPAP, weight loss, surgery if severe
Circadian Rhythm Disorders	Misaligned sleep-wake schedule (delayed/advanced sleep phase, shift work)	Adolescents, night-shift workers	Light therapy, melatonin, sleep scheduling

Disorder	Key Features / Symptoms	Typical Age / Notes	Management / Treatment
Nightmares	Vivid, frightening dreams, REM sleep, recalled vividly	Children & adults	Usually self-limiting, reassurance
Sleep Terrors	Abrupt awakening, screaming, intense fear, non-REM, amnesia	Children	Safety measures, reassurance, rarely meds
Sleepwalking (Somnambulism)	Walking or performing complex behavior during non-REM sleep, amnesia	Children	Safety precautions, reassurance
REM Sleep Behavior Disorder	Acting out dreams, loss of normal REM muscle atonia	Older adults, Parkinson's risk	Clonazepam, safety precautions
Restless Legs Syndrome (RLS)	Urge to move legs, uncomfortable sensations, worse at night	Adults	Dopaminergic drugs, iron supplementation if deficient
Periodic Limb Movement Disorder	Repetitive limb jerks during sleep, often unnoticed	Adults	Dopaminergic drugs

Neurochemicals

Neurotransmitter	Main Function	Related Psychiatric Disorders	MRCP 1 Notes
Serotonin (5-HT)	Mood, sleep, appetite, anxiety, impulse control	Depression, anxiety disorders, OCD, eating disorders	Low serotonin → depression, anxiety, impulsivity
Norepinephrine (NE)	Attention, arousal, mood, stress response	Depression, anxiety, mania	Low NE → depression; High NE → anxiety, mania
Dopamine (DA)	Reward, motivation, movement, cognition	Schizophrenia, bipolar disorder, Parkinson's	High DA (mesolimbic) → positive psychotic symptoms; Low DA (mesocortical) → negative symptoms

Hormones

Chemical	Role	Related Disorders	Notes
Acetylcholine (ACh)	Cognition, memory	Alzheimer's, some mood disorders	Low ACh → memory deficits
Cortisol (stress hormone)	Stress response, HPA axis	Depression, PTSD, anxiety	Chronic high cortisol → depression, hippocampal damage
Endorphins / Enkephalins	Mood, pain regulation	Depression, addiction	Low levels → dysphoria, poor stress coping
Melatonin	Sleep-wake cycle	Sleep disorders, depression	Low melatonin → insomnia, circadian rhythm problems

Ophthalmology 4 quest

Symptom	Common Causes (High-Yield)
Red eye	Conjunctivitis, keratitis, uveitis, acute glaucoma
Painful vision loss	Acute glaucoma, optic neuritis, keratitis
Painless vision loss	Retinal artery/vein occlusion, cataract, macular degeneration
Flashes / floaters	Retinal detachment, vitreous hemorrhage
Diplopia	Cranial nerve palsy (III, IV, VI), thyroid eye disease, myasthenia

Retinal disorders

- **Diabetic retinopathy:** Microaneurysms, hemorrhages, exudates; manage glycemic control, laser if proliferative
- **Retinal artery occlusion:** Sudden, painless loss; cherry-red spot; emergency
- **Macular degeneration:** Central vision loss; dry (atrophic) vs wet (neovascular)

RAO

Causes / Risk Factors

- **Embolic:** Carotid artery plaque, cardiac thrombus (AF, valvular disease)
- **Thrombotic:** Atherosclerosis
- **Other:** Giant cell arteritis (especially in patients >50), hypercoagulable states

Investigations

- **Fundoscopy** → key for diagnosis
- **Carotid Doppler** → look for embolic source
- **Cardiac evaluation** → AF, valvular disease & **ESR/CRP** → if suspect giant cell arteritis

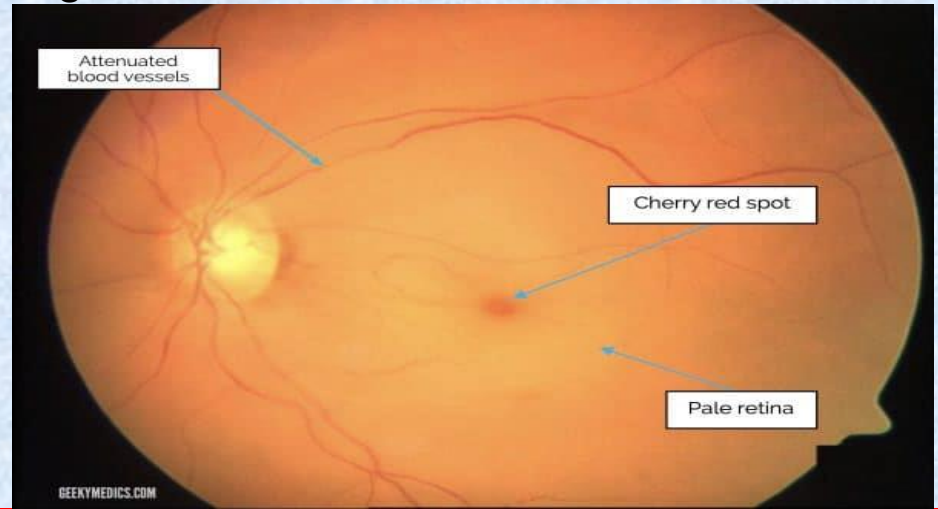
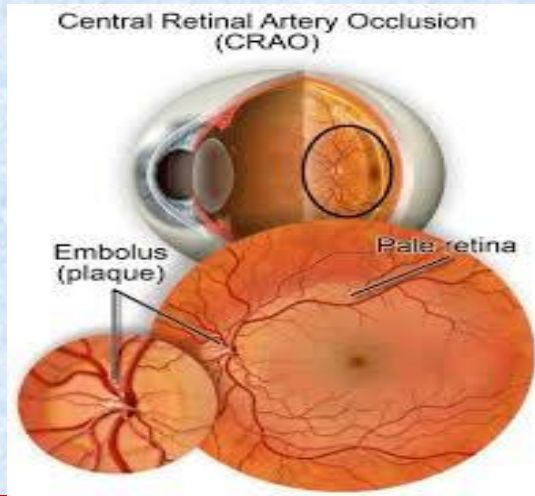
Clinically

Feature	Description
Vision loss	Sudden, severe, usually monocular
Pain	Usually painless (painful suggests acute glaucoma)
Fundoscopy	Pale retina with cherry-red spot at fovea
Relative afferent pupillary defect (RAPD)	Present if unilateral
Associated signs	Possible carotid bruits, cardiovascular risk factors

Management

Management (Emergency!)

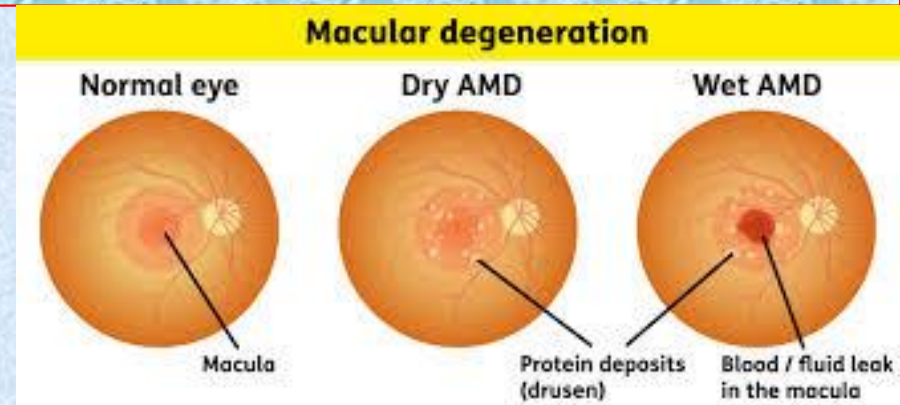
- **Immediate ophthalmology referral**
- **Reduce IOP:** ocular massage, acetazolamide, anterior chamber paracentesis
- **Treat underlying cause:**
 - Embolic source → antiplatelets or anticoagulation
 - Giant cell arteritis → high-dose steroids
- **Time is critical:** irreversible retinal damage can occur within **90–100 minutes**



Macular degeneration

Definition

- Degeneration of the **macula** (central part of retina responsible for detailed vision)
- Causes **progressive central vision loss**, while **peripheral vision remains intact**
- Most common in **elderly (>60 years)**



Type

Key Features

Dry (atrophic, non-neovascular)

Most common (~80–90%), slow progression, drusen on fundoscopy, gradual central vision loss

Wet (neovascular, exudative)

Less common (~10–15%), rapid progression, new abnormal blood vessels leak fluid/blood, sudden central vision distortion or loss

Clinical picture and treatment

Clinical Features

- **Bilateral central vision loss** → reading, recognizing faces becomes difficult
- **Metamorphopsia** → straight lines appear wavy (especially in wet AMD)
- Peripheral vision remains **normal &** Usually painless

Investigations

- **Fundoscopy:** Drusen (yellow deposits) in dry AMD, choroidal neovascularization in wet AMD
- **Optical coherence tomography (OCT):** Detects retinal thickening, fluid, and neovascularization
- **Fluorescein angiography:** Confirms wet AMD

Type	Treatment
Dry AMD	Lifestyle: stop smoking, antioxidants (AREDS2 supplements), monitor progression
Wet AMD	Intravitreal anti-VEGF injections (e.g., ranibizumab, bevacizumab) to stop neovascularization

Optic Neuritis (ON)

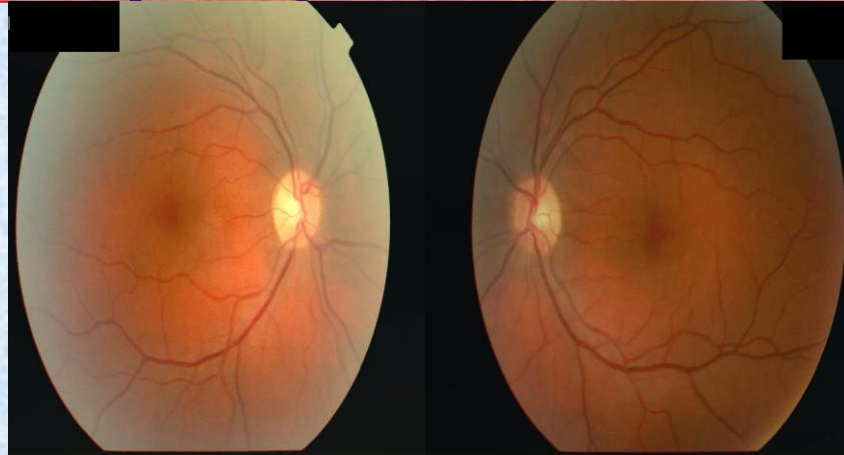
- **Definition**
- Inflammation of the **optic nerve**
- Causes **acute, usually unilateral vision loss**
- Often associated with **multiple sclerosis (MS)**

Causes / Risk Factors

- **Idiopathic** (most common)
- **Multiple sclerosis** → demyelination of CNS
- **Infections** → viral (measles, mumps), bacterial (syphilis)
- **Autoimmune** → lupus, sarcoidosis & **Medications / toxins** → ethambutol, amiodarone

3. Investigations

- **Ophthalmology exam** → fundus, RAPD
- **MRI of brain & orbits** → detect demyelinating lesions (risk for MS)
- **Visual evoked potentials (VEP)** → delayed conduction in optic nerve



Clinical picture

Feature	Description
Vision loss	Acute, unilateral, usually progressive over hours to days
Pain	Retro-orbital pain, worse on eye movement
Color vision	Dyschromatopsia (colors appear faded, especially red)
Visual field defect	Central scotoma (loss of central vision)
Relative Afferent Pupillary Defect (RAPD)	Present if unilateral
Fundoscopy	May be normal (retrobulbar ON) or show optic disc swelling (papillitis)

Management

- **High-dose IV corticosteroids** → speed recovery of vision
- **Monitor for MS** → optic neuritis may be first presentation
- **Treat underlying cause** if secondary (infection, autoimmune)

Retinal Vein Occlusion

Definition

- Blockage of a **retinal vein**, causing impaired venous drainage of the retina
- Second most common retinal vascular disorder after **central retinal artery occlusion (CRAO)**
- Usually **painless vision loss**, variable severity

Types :

Type	Description	Typical Findings
Central Retinal Vein Occlusion (CRVO)	Blockage of the central retinal vein at or posterior to the optic disc	“Blood and thunder retina” : widespread retinal hemorrhages, dilated/tortuous veins, optic disc swelling, macular edema
Branch Retinal Vein Occlusion (BRVO)	Blockage of a branch of the central retinal vein	Sectoral retinal hemorrhages corresponding to affected quadrant; venous tortuosity

Clinical

Feature	Description
Vision loss	Usually painless; can be sudden or gradual
Fundoscopy	Retinal hemorrhages, venous dilation, cotton wool spots, macular edema
Other signs	Neovascularization may occur in ischemic CRVO (risk of glaucoma, vitreous hemorrhage)

Management

Investigations

- **Fundoscopy** → key diagnostic tool
- **Fluorescein angiography** → ischemic vs non-ischemic RVO
- **OCT (Optical Coherence Tomography)** → detect macular edema
- **Systemic workup** → hypertension, diabetes, hyperlipidemia, coagulation profile

Treatment

Type / Complication	Treatment
Macular edema	Intravitreal anti-VEGF (ranibizumab, bevacizumab), steroids
Neovascularization / ischemic CRVO	Panretinal photocoagulation
Systemic risk factors	Control hypertension, diabetes, lipids; stop smoking

Condition	Pain	Discharge	Key Features / Notes	Urgency
Bacterial conjunctivitis	Mild	Purulent	Usually unilateral, sticky eyelids	Low
Viral conjunctivitis	Mild	Watery	Often bilateral, preceded by URI	Low
Allergic conjunctivitis	Mild/itchy	Watery	Bilateral, seasonal, itching, cobblestone papillae	Low
Episcleritis	Mild	None	Localized redness, self-limiting	Low

Painful red eye

Condition	Pain	Discharge	Key Features / Notes	Urgency
Keratitis (bacterial / HSV)	Moderate-Severe	Purulent (bacterial) / watery (HSV)	Corneal infiltrate or dendritic ulcer; photophobia	High
Uveitis / Iritis	Moderate	None	Photophobia, small/sluggish pupil, blurred vision	High
Acute Angle-Closure Glaucoma	Severe	None	Mid-dilated pupil, halos, nausea/vomiting, very high IOP	Emergency
Scleritis	Severe, boring	None	Often autoimmune, risk of vision loss	High
Trauma / Foreign Body	Moderate-Severe	Variable	History of trauma/contact lens, tearing, redness	High

Glaucoma

Definition

- Group of eye disorders causing **optic nerve damage**, usually associated with **increased intraocular pressure (IOP)**
- Can lead to **progressive visual field loss** → blindness if untreated

Type	Onset / Age	Key Features	Notes / Exam
Primary Open-Angle Glaucoma (POAG)	Chronic, adults >40	Painless, gradual peripheral vision loss → “tunnel vision”	Most common, often asymptomatic early; optic disc cupping on fundoscopy
Primary Angle-Closure Glaucoma (PACG)	Acute, middle-aged/elderly	Severe eye pain, red eye, blurred vision, halos around lights, headache, nausea/vomiting	Emergency! Mid-dilated fixed pupil, corneal haze, very high IOP
Secondary Glaucoma	Any age	Due to trauma, steroid use, uveitis, neovascularization	Treat underlying cause
Congenital Glaucoma	Infants	Tearing, photophobia, enlarged eye (buphthalmos)	Rare, surgical management