CLINICALJUDGE™ · MASTER SERIES

EYE & VISION DISORDERS

DISORDER-BY-DISORDER COMPARISON · PRIORITIES · TEACHING · 2026 NGN NCLEX-RN

★ 100% Score Target | Cataracts | Glaucoma (Open vs Acute) | Macular Degeneration | Retinal Detachment | Conjunctivitis | Diabetic Retinopathy | Eye Trauma & Chemical Burn | Corneal Abrasion | Ophthalmic Med Administration | Post-Op Eye Surgery Care

COLOR KEY Emergency / Critical · Pathophysiology · Expected / Safe · Nursing Priority · Key NCLEX Point · Medication · Patient Teaching

1 FOUNDATIONS & ASSESSMENT

VISION PATHWAY & KEY REFERENCE VALUES

FOUNDATION

Cornea → Aqueous humor → Pupil / Iris → Lens → Vitreous → Retina → Optic nerve

REFERENCE	NORMAL	NCLEX SIGNIFICANCE
Intraocular pressure (IOP)	10–21 mmHg	↑ IOP → optic nerve damage (glaucoma)
Visual acuity	20/20	20/200 (best-corrected) = legal blindness
Central vision	Macula / fovea	Lost in **macular degeneration**
Peripheral vision	Outer retina	Lost in **glaucoma** (tunnel vision)

⚑ ORIENT THE BIG PICTURE

- **Glaucoma** = loses **PERIPHERAL** vision first (tunnel). **Macular degeneration** = loses **CENTRAL** vision (blind spot/scotoma). Opposite patterns.
- Sudden painless vision change with **flashes/floaters/curtain** = think **retinal detachment** (emergency).
- Sudden painful red eye with **halos, nausea, fixed pupil** = **acute angle-closure glaucoma** (emergency).

2 MASTER DISORDER COMPARISON

ALL MAJOR EYE DISORDERS SIDE-BY-SIDE HIGH-YIELD CORE

DISORDER	PAIN?	HALLMARK VISION CHANGE	KEY MANAGEMENT
CATARACT	Painless	Gradual cloudy/blurred vision, glare, halos, faded colors, cloudy lens	Surgical lens removal + IOL implant
OPEN-ANGLE GLAUCOMA	Painless	Gradual **peripheral** loss (tunnel), halos, poor night vision	Lifelong IOP-lowering drops
ACUTE ANGLE-CLOSURE GLAUCOMA	SEVERE pain	Sudden ↓ vision, halos, red eye, fixed mid-dilated pupil, N/V	EMERGENCY — ↓ IOP fast, laser iridotomy
MACULAR DEGENERATION	Painless	Loss of **central** vision; wavy lines (metamorphopsia); scotoma	Anti-VEGF injections (wet); AREDS vitamins (dry)
RETINAL DETACHMENT	Painless	Flashes, floaters, "curtain/shadow" over field	EMERGENCY — surgical reattachment
CONJUNCTIVITIS	Mild irritation	Redness, discharge, itching/gritty feel; vision usually intact	Antibiotic drops (bacterial); hygiene; supportive
DIABETIC RETINOPATHY	Painless	Blurred/fluctuating vision, floaters, progressive loss	Glucose/BP control, anti-VEGF, laser photocoagulation
CORNEAL ABRASION	Painful	Pain, photophobia, tearing, foreign-body sensation	Antibiotic drops; avoid patch/contact use
CHEMICAL BURN	Severe pain	Sudden pain, redness, ↓ vision after exposure	EMERGENCY — flush immediately 15–20+ min

⚑ THE THREE EYE EMERGENCIES

`Chemical burn` `Acute angle-closure glaucoma` `Retinal detachment` — all need immediate action to save vision.

3 CATARACTS

PATHOPHYSIOLOGY & PRESENTATION

Lens protein clumps → Lens opacity/clouding → Light scatter → Gradual painless vision loss

RISK FACTORS & SIGNS

- Aging (#1), diabetes, long-term steroids
- UV exposure, smoking, ocular trauma
- Painless blurred/cloudy/dim vision
- Glare & halos; difficulty driving at night
- Faded color perception; "milky" white pupil

TREATMENT

- ✓ Surgery is the only cure — outpatient phacoemulsification
- ✓ Cloudy lens removed → intraocular lens (IOL) implanted
- ✓ One eye at a time; vision improves gradually
- ✓ Excellent prognosis

NURSING PRIORITIES — CATARACT SURGERY POST-OP

1. **Prevent ↑ intraocular pressure:** avoid bending at the waist, lifting >5–10 lb, straining, vomiting, coughing, sneezing — anything that raises IOP and stresses the surgical site.
2. **Protect the eye:** wear the eye shield/glasses (especially at night), do not rub or press the eye, sleep on the non-operative side.
3. **Recognize complications to report STAT:** sudden/sharp eye pain, ↑ or purulent drainage, decreased vision, or flashes of light (possible retinal detachment or hemorrhage/infection).
4. **Medication adherence:** instill antibiotic/anti-inflammatory drops as prescribed; mild itching/scratchiness is expected.

☑ CATARACT PATIENT TEACHING

- ☐ Avoid bending, heavy lifting, straining
- ☐ Wear eye shield at night to prevent rubbing
- ☐ Do not rub or apply pressure to the eye
- ☐ Report sharp pain, vision loss, or flashes
- ☐ Use prescribed drops; wash hands first
- ☐ Avoid getting water/soap in eye when bathing
- ☐ Wear dark glasses outdoors (photosensitivity)
- ☐ Vision improves gradually over weeks

4 GLAUCOMA — OPEN-ANGLE VS ACUTE ANGLE-CLOSURE

THE CRITICAL COMPARISON MUST KNOW

PRIMARY OPEN-ANGLE (CHRONIC)

- Most common; "silent thief of sight"
- **Gradual, painless**, bilateral
- Loss of **peripheral** vision → tunnel vision
- Halos, difficulty adapting to dark
- Often found on routine exam
- Tx: lifelong IOP-lowering eye drops

ACUTE ANGLE-CLOSURE (EMERGENCY)

- ⚠ **SUDDEN severe eye pain** + headache
- ⚠ Nausea & vomiting
- ⚠ Halos around lights, blurred vision
- ⚠ Red eye, **fixed mid-dilated pupil**
- ⚠ "Rock-hard" eyeball; rapid vision loss
- ⚠ Tx: **emergent IOP reduction → laser iridotomy**

⚑ VISION-LOSS REALITY

Glaucoma damage is **permanent and irreversible** — treatment **prevents further** loss but cannot restore lost vision. Early detection & adherence are everything.

GLAUCOMA MEDICATIONS PHARM

CLASS	EXAMPLE	ACTION / KEY TEACHING
Prostaglandin analogs	latanoprost	First-line; ↑ outflow. May **darken iris & eyelashes**, lengthen lashes.
Beta-blockers	timolol	↓ aqueous production. **Caution in asthma/COPD & bradycardia** (systemic absorption).
Alpha-adrenergic agonists	brimonidine	↓ production + ↑ outflow.
Carbonic anhydrase inhibitors	acetazolamide, dorzolamide	↓ aqueous production; oral form used in acute attack (sulfa allergy caution).
Cholinergics / miotics	pilocarpine	Constricts pupil to open drainage angle; used in acute closure (causes dim vision/brow ache).
Osmotics	mannitol (IV)	Rapidly ↓ IOP in acute emergency.

⚑ KEY NCLEX POINTS

- Teach **nasolacrimal (punctal) occlusion** — apply gentle pressure to the inner corner 30–60 sec after drops to reduce systemic absorption.
- **Avoid mydriatics/anticholinergics** (atropine, antihistamines, some cold meds) in angle-closure — they dilate the pupil and can precipitate an attack.
- Stress drops are **lifelong** — never stop even if vision "feels fine."

5 AGE-RELATED MACULAR DEGENERATION (AMD)

DRY VS. WET AMD

DRY (ATROPHIC) — ~90%

- Gradual breakdown of macular cells; **drusen** deposits
- Slow, progressive central vision loss
- No cure — AREDS antioxidant + zinc vitamins may slow it

WET (NEOVASCULAR) — FASTER/SEVERE

- ⚠ Abnormal vessels grow & **leak** under retina
- ⚠ **Rapid, severe central vision loss**
- ⚠ Tx: **anti-VEGF injections** (ranibizumab, aflibercept, bevacizumab); photodynamic/laser therapy

⚑ HALLMARK SIGNS & TOOLS

- **Scotoma** (central blind spot) + **metamorphopsia** (straight lines look wavy/distorted). Peripheral vision is preserved.
- **Amsler grid** used daily at home — report new wavy lines or missing areas immediately (may signal progression to wet AMD).

☑ AMD PATIENT TEACHING

- ☐ Use Amsler grid daily; report changes promptly
- ☐ Stop smoking (major modifiable risk)
- ☐ Use magnifiers & low-vision aids; increase lighting
- ☐ Eat leafy greens / fish; take AREDS vitamins as advised
- ☐ Wear UV-protective sunglasses
- ☐ Keep regular ophthalmology follow-up

6 RETINAL DETACHMENT

RECOGNITION & MANAGEMENT EMERGENCY

CLASSIC PAINLESS WARNING SIGNS

- ⚠ Sudden **flashes of light** (photopsia)
- ⚠ New or increased **floaters**
- ⚠ **"Curtain/veil/shadow"** across visual field
- ⚠ Localized loss of vision; no pain
- ⚠ Risk: aging, myopia, trauma, post-cataract surgery, diabetes

SURGICAL REPAIR OPTIONS

- ✓ Scleral buckle
- ✓ Pneumatic retinopexy (gas bubble)
- ✓ Vitrectomy
- ✓ Laser photocoagulation / cryotherapy

NURSING PRIORITIES — RETINAL DETACHMENT

1. **Act fast — protect remaining vision:** keep patient on bed rest, minimize activity/eye movement, notify provider/ophthalmology immediately.
2. **Pre-op positioning:** position so the detached area is **dependent (inferior)** to limit further detachment; both eyes may be patched to reduce movement.
3. **Post-op gas-bubble positioning:** maintain prescribed (often **face-down/prone**) head position so the bubble tamponades the retina.
4. **Avoid altitude changes: no air travel or high altitude** while an intraocular gas bubble is present (expansion ↑ IOP).
5. **Monitor & teach:** report increasing pain, decreasing vision, or signs of infection; avoid ↑ IOP activities (bending, straining, heavy lifting).

7 CONJUNCTIVITIS ("PINK EYE")

THREE TYPES COMPARED

BACTERIAL

- ⚠ **Purulent** yellow-green discharge
- ⚠ Crusting (lids stuck on waking)
- ⚠ Very contagious
- ⚠ Tx: antibiotic drops/ointment

VIRAL

- **Watery** discharge
- Often with URI/cold
- Highly contagious; self-limiting
- Tx: supportive, cool compress

ALLERGIC

- ✓ **Itching**, watery, bilateral
- ✓ Seasonal; with other allergy signs
- ✓ Not contagious
- ✓ Tx: antihistamine drops, avoid allergen

☑ CONJUNCTIVITIS TEACHING (INFECTION CONTROL FOCUS)

- ☐ Wash hands frequently; avoid touching/rubbing eyes
- ☐ Do not share towels, washcloths, or pillows
- ☐ Use separate cloth for each eye; wipe inner → outer
- ☐ Discard & replace eye makeup; don't share it
- ☐ Stop wearing contacts until cleared
- ☐ Stay home from school/work while contagious (bacterial/viral)
- ☐ Complete the full antibiotic course if prescribed

8 DIABETIC RETINOPATHY

PROCESS, MANAGEMENT & TEACHING

Chronic hyperglycemia → Retinal microvascular damage → Microaneurysms & hemorrhage → Neovascularization (proliferative) → Vision loss

A leading cause of blindness in working-age adults; often **asymptomatic early**, then blurred/fluctuating vision and floaters.

MANAGEMENT

- ✓ Tight **glucose & blood-pressure control** (primary)
- ✓ Anti-VEGF injections
- ✓ Laser photocoagulation (proliferative)
- ✓ Vitrectomy for hemorrhage

KEY TEACHING

- **Annual dilated eye exam** (earlier/more often if changes)
- Maintain A1C & BP targets
- Stop smoking; manage lipids
- Report new floaters or vision changes

9 EYE TRAUMA & EMERGENCIES

CHEMICAL BURN — FIRST PRIORITY

DO THIS FIRST

1. **Flush IMMEDIATELY:** irrigate the eye with copious water or normal saline for **at least 15–20 minutes** (longer for alkali) — before anything else, including a full assessment. Flush from inner to outer canthus.
2. **Then seek emergency care** & continue irrigation en route as able. Remove contact lenses.
3. **Note the agent: alkali burns (lye, ammonia, cleaners) are worse than acid** — they penetrate deeper and keep damaging tissue.

FOREIGN BODY, PENETRATING INJURY & CORNEAL ABRASION

PENETRATING / IMPALED OBJECT

- ⚠ **Do NOT remove the impaled object**
- ⚠ Stabilize object; cover both eyes (rigid shield)
- ⚠ Avoid pressure on the globe
- ⚠ Keep patient calm; transport for surgery

CORNEAL ABRASION

- Pain, photophobia, tearing, foreign-body sensation
- Diagnosed with fluorescein stain
- Tx: antibiotic drops; do not patch tightly; avoid rubbing/contacts
- Usually heals in 24–72 hr

⚑ GENERAL TRAUMA RULES

Never apply pressure to a possibly ruptured globe; never remove an impaled object; cover BOTH eyes for penetrating injury (eyes move together — patching both reduces movement of the injured one).

10 OPHTHALMIC MEDICATION ADMINISTRATION

CORRECT TECHNIQUE — DROPS & OINTMENT SKILL

1. **Hand hygiene** & verify the right eye(s); have patient tilt head back & look up.
2. **Pull down the lower lid** to expose the conjunctival sac; instill the drop into the **sac** — never directly on the cornea, and don't touch the dropper to the eye.
3. **Nasolacrimal (punctal) occlusion:** apply gentle pressure to the inner canthus for 30–60 sec to limit systemic absorption & keep med in the eye.
4. **Spacing:** wait **5 minutes** between different eye drops; give **drops before ointment**.
5. **Ointment:** apply a thin ribbon along the lower lid from **inner → outer** canthus; expect temporary blurred vision (apply at bedtime when possible).

⚑ KEY NCLEX POINTS

- Remove contacts before instilling most drops (unless lens-care product).
- Don't let the patient drive until ointment-related blurring resolves.
- If both a drop & ointment are due, the **drop goes first**.

✓ MASTER PATIENT EDUCATION CHECKLIST

☑ CONFIRM PATIENT / CAREGIVER UNDERSTANDING

- ☐ Wash hands before touching eyes or instilling drops
- ☐ Instill drops into the lower conjunctival sac, not the cornea
- ☐ Use punctal occlusion to limit systemic drug effects
- ☐ Wait 5 min between different drops; drops before ointment
- ☐ Glaucoma drops are lifelong — never stop abruptly
- ☐ Avoid mydriatic/anticholinergic meds in angle-closure
- ☐ After eye surgery: no bending, lifting, or straining
- ☐ Wear the eye shield at night; do not rub the eye
- ☐ Report sudden pain, vision loss, flashes, or curtain effect STAT
- ☐ Flush chemical splashes immediately for 15–20+ minutes
- ☐ Use the Amsler grid daily for macular degeneration
- ☐ Keep annual dilated exams (especially with diabetes)
- ☐ Maintain glucose, BP, & lipid control to protect vision
- ☐ Stop smoking to reduce AMD & cataract progression
- ☐ Wear UV-protective sunglasses outdoors
- ☐ Practice infection control with conjunctivitis (no sharing towels/makeup)
- ☐ Don't share eye drops between people
- ☐ Use low-vision aids & home safety measures (lighting, clear paths)
- ☐ Keep the medication regimen & follow-up appointments
- ☐ Use teach-back to confirm drop technique

PDF EXPORT & PRINT INSTRUCTIONS

1. Open this file in **Google Chrome** or **Microsoft Edge** for best fidelity.
2. Press **Ctrl + P** (Windows) or **Cmd + P** (Mac) to open the print dialog.
3. Set **Destination → Save as PDF**.
4. Set **Scale → 65–70%** (or "Fit to page width") so comparison tables & panels stay intact.
5. Under **More settings**, enable **"Background graphics"** so colors & legend print.
6. Set margins to **Default** or **None**; orientation **Portrait** (Landscape for the wide master table).
7. Click **Save** — your printable Eye Disorders MASTER guide is ready.