Third Time is the Charm

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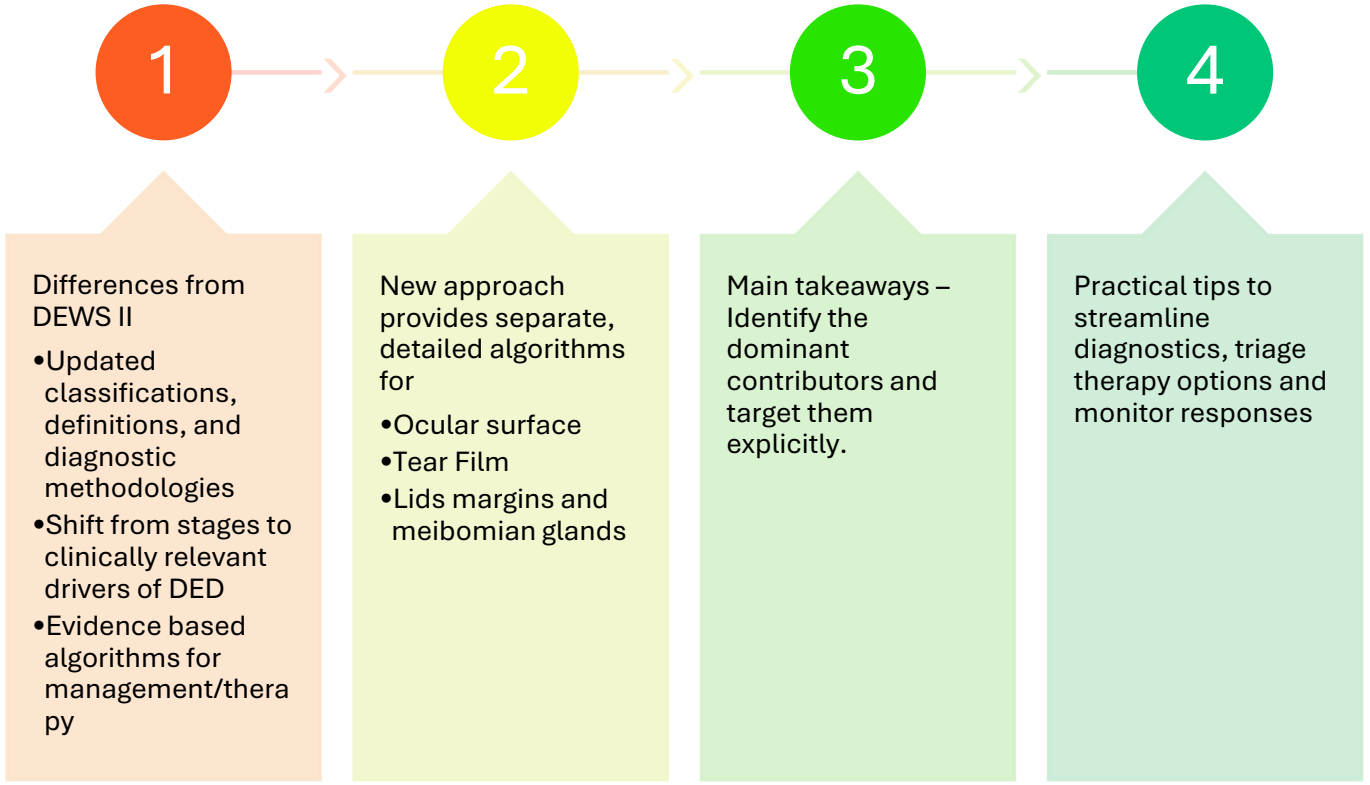
Synopsis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Differences from DEWS II
•Updated classifications, definitions, and diagnostic methodologies
•Shift from stages to clinically relevant drivers of DED
•Evidence based algorithms for management/therapy
New approach provides separate, detailed algorithms for
•Ocular surface
•Tear Film
•Lids margins and meibomian glands
Main takeaways – Identify the dominant contributors and target them explicitly.
Practical tips to streamline diagnostics, triage therapy options and monitor responses

Intended Learning Objectives

APPLY DEWS III DIAGNOSTICS EFFICIENTLY

IDENTIFY DOMINANT DRY EYE DRIVERS

MATCH TREATMENT TO MECHANISM

AVOID COMMON PITFALLS

Why TFOS DEWS III?

Dry eye is *not* a single disease

DEWS III reflects:

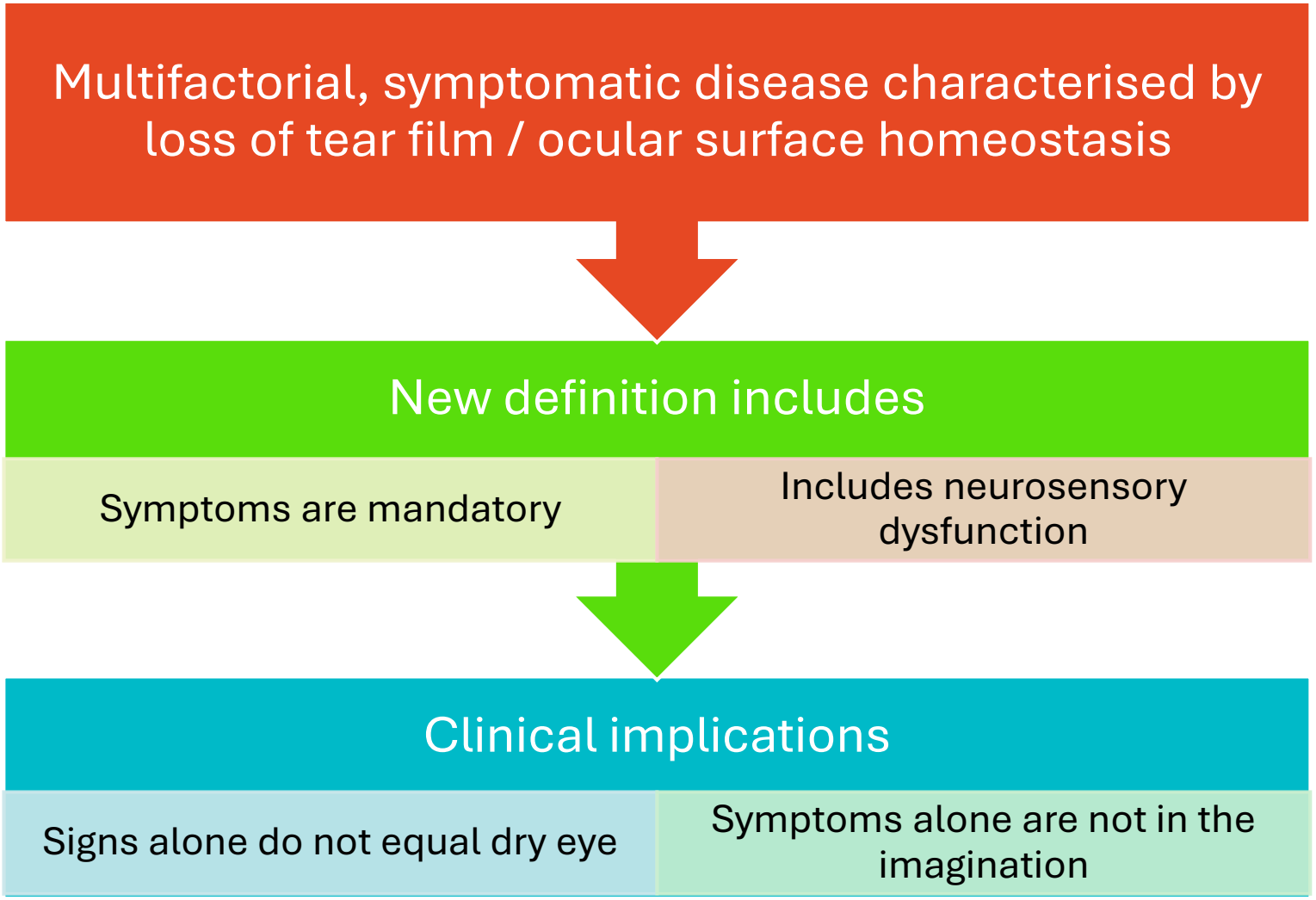
- New diagnostics
- New therapies

Better understanding of **symptom–sign discordance**

Focus shift:

- From “severity staging”
- To **driver-based management**

Updated Definition (DEWS III)



From Types to Drivers

DEWS II – Aqueous deficiency vs evaporative (Spectrum ?)

DEWS III – Multiple Overlapping Drivers

1. Tear film instability/osmolarity
2. Eyelids / MGD / blink
3. Ocular surface inflammation and damage
4. Neurosensory dysfunction

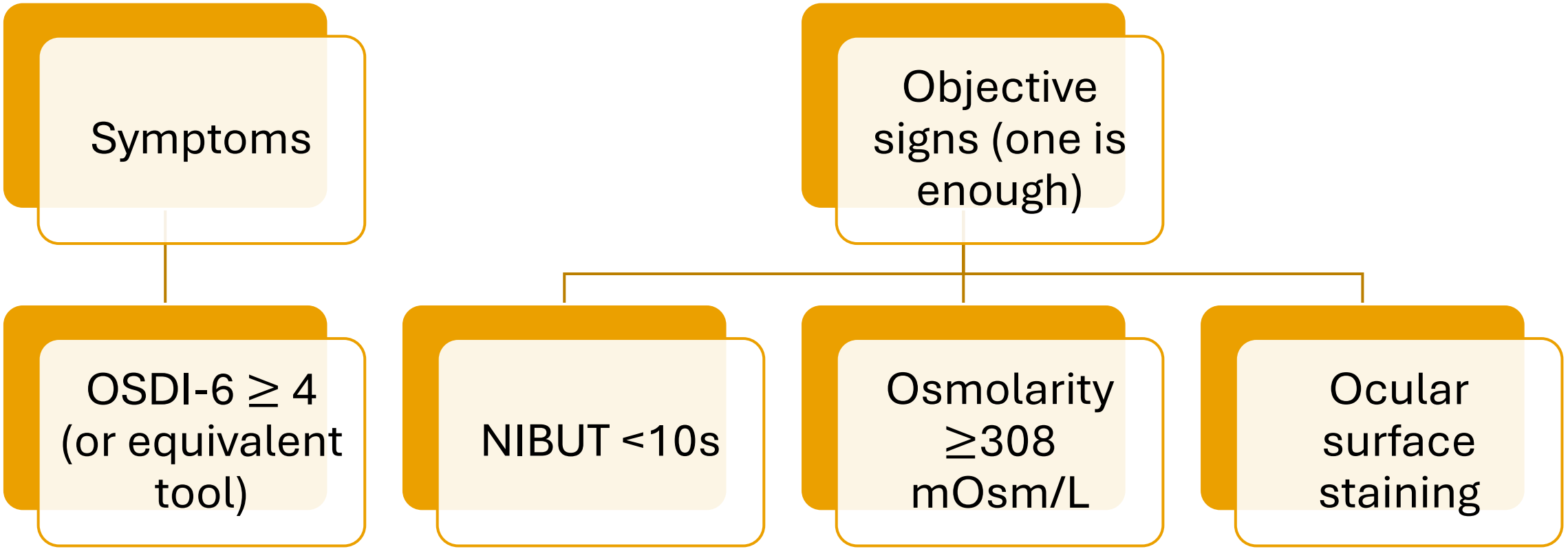
Diagnosis Philosophy

Minimal data needed

Symptoms + one objective sign

Escalate tests only if management changes

Tier 1 Diagnosis



Symptoms

	Constantly	Mostly	Often	Sometimes	Never
Have you experienced any of the following *during a typical day within the last month?*					
1. Eyes that are sensitive to light?	4	3	2	1	0
2. Vision blurring between blinks (with your refractive correction if needed)?	4	3	2	1	0
	Symptoms and visual disturbance subscale ⇨				
Have problems with your eyes limited you in performing any of the following *during a typical day within the last month?*					
3. Driving or being driven at night?	4	3	2	1	0
4. Watching TV, or a similar task?	4	3	2	1	0
	Visual function / tasks subscale ⇨				
Have your eyes felt uncomfortable in any of the following situations *during a typical day within the last month?*					
5. Windy conditions?	4	3	2	1	0
6. Places or areas with low humidity?	4	3	2	1	0
	Environmental subscale ⇨				

FIGURE 4. Questions of the OSDI-6.[146,147] The diagnostic cut-off for dry eye is a summed score of ≥4.

Staining Thresholds

Positive staining (any one)

- Corneal flourescein ≥5 spots
- Conjunctiva lissamine green ≥9 spots
- Lid margin staining ≥2 mm × ≥ 25% width

When to go deeper (optional tests)

Only escalate testing if it will

- Change therapy
- Explain the symptom/sign mismatch
- Justify advanced treatment

Examples

- Meibography – device based MGD therapy
- MMP-9 biomarker – anti-inflammatory escalation
- Corneal sensitivity – neurosensory pain

Drivers of dry eye and therapeutic matching

DEWS III emphasizes that most DED patients have MULTIPLE OVERLAPPING DRIVERS. The idea is to identify the dominant contributors and target them directly.

Multiple therapies can be used in combination.

Lifestyle/environmental modifications remain foundational and should not be overlooked.

Examples

Domain	Examples of Drivers	Therapeutic Focus / Target
Tear Film / tear instability / osmolarity	Aqueous deficiency, poor lipid layer, increased evaporation	Tear supplementation, lipid-containing tears, osmoprotectants, tear conservation
Eyelids / blink / MGD / lid disease	Meibomian gland dysfunction, blepharitis (incl Demodex), poor blink, lid laxity	Warm compresses, lid hygiene, IPL, thermal/mechanical devices, novel pharmacologics (selenium sulfide, lotilaner)
Ocular Surface / inflammation / damage	Epithelial injury, inflammation, neurosensory dysfunction	Anti-inflammatory therapy (topical steroids, cyclosporine, lifitegrast), regenerative therapies (blood-derived, amnion), neuromodulation

Tear Film Deficiencies

ETIOLOGIC DRIVER TESTS
Lipid
Tear film lipid layer thickness / interferometry
Meibomian gland expressibility
Meibum quality
Aqueous
Tear meniscus height
Meniscometry / Schirmer* / phenol red thread test*
Mucin / glycocalyx
Lissamine green / rose bengal staining
Conjunctival impression cytology

TEAR FILM DEFICIENCIES

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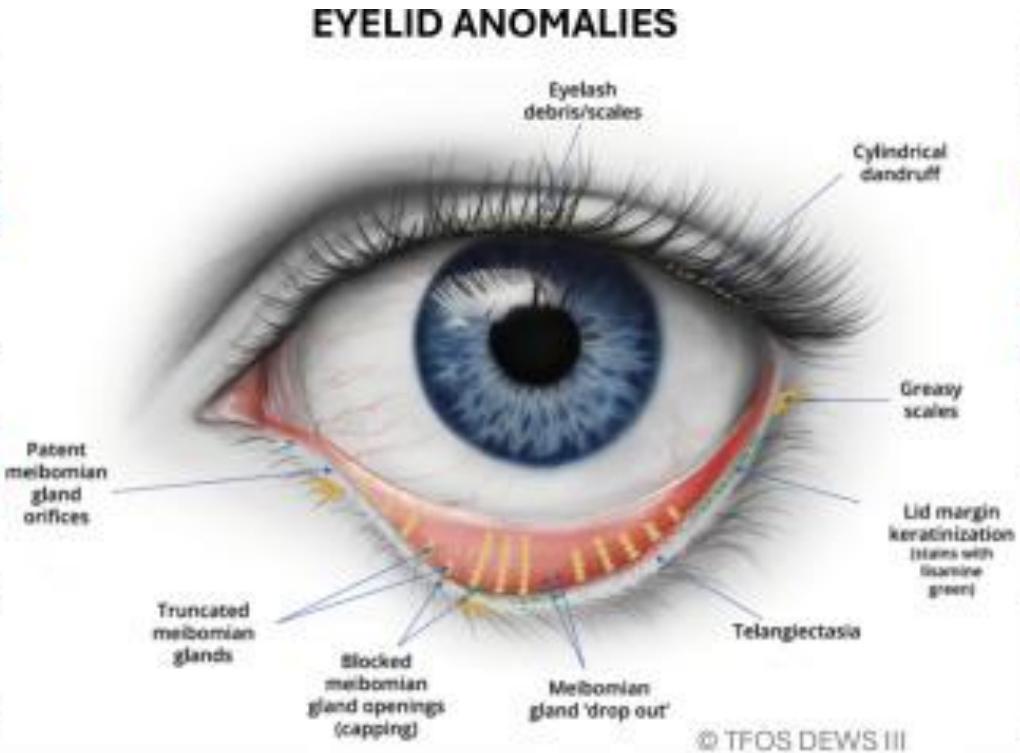
EVIDENCE-BASED INTERVENTIONS
Lipid
Tear supplementation / stabilization (lipomimetics)
Tear conservation devices (moisture-retaining spectacles)
Pharmacological tear stimulation / restoration
Device tear stimulation / restoration
Blink therapies
Topical lid hygiene
Aqueous
Oral nutrition (Omega 3)
Tear supplementation / stabilization
Tear conservation devices
Pharmacological / device tear stimulation / restoration
Topical anti-inflammatories
Ocular surface regenerators
Surgical options
Mucin / glycocalyx
Tear supplementation / stabilization (HP guar)
Topical anti-inflammatories
Pharmacological tear stimulation
Device tear stimulation (neurostimulation)

Eyelid Anomalies

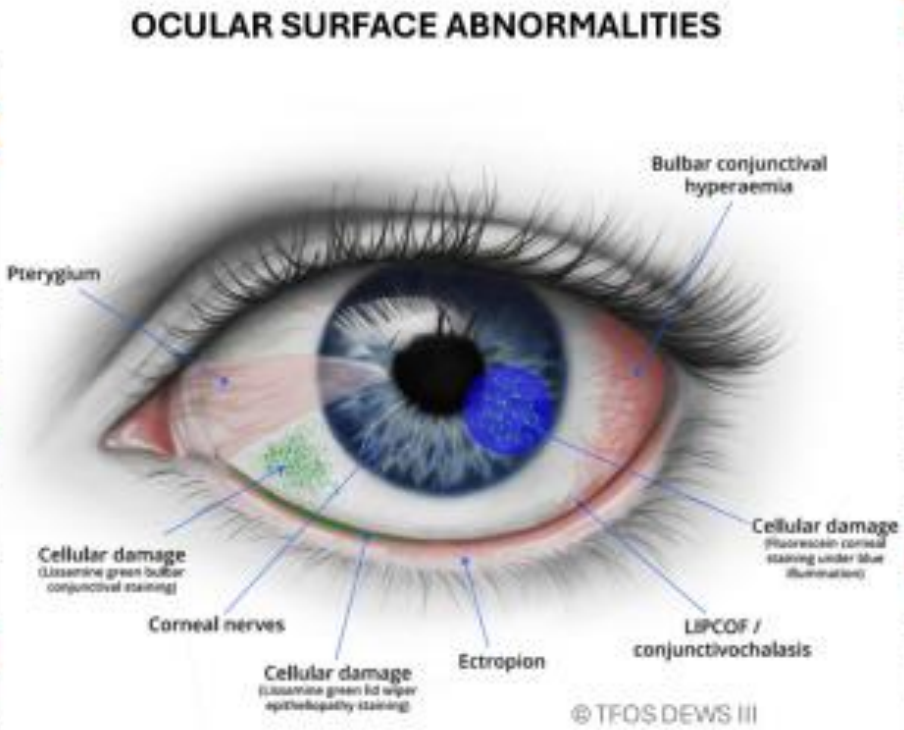
ETIOLOGIC DRIVER TESTS
Blinking / lid closure
Incomplete blinking
Anterior blepharitis
Eyelid biomicroscopy - greasy (seborrheic) or flaky (staphylococcal)
Eyelash base - cylindrical dandruff - *Demodex*
Meibomian gland dysfunction
Pouting, missing, displaced gland orifices
Meibomian gland expressibility
Meibography – truncated, dilated glands, 'drop out'
Telangiectasia
Lid margin keratinization



EVIDENCE-BASED INTERVENTIONS
Blinking / lid closure
Blink exercises
Anterior blepharitis
Topical lid hygiene
Oral antibiotics
Meibomian gland dysfunction
Oral nutrition (vitamin D3)
Tear supplementation / stabilization (lipid-based, androgen)
Pharmacological tear stimulation / restoration (topical azithromycin, selenium sulfide)
Device tear stimulation / restoration (internal and external lid heating; IPL; LLLT; QMR; radio-frequency
Lid margin debridement for significant keratinization
Oral antibiotics

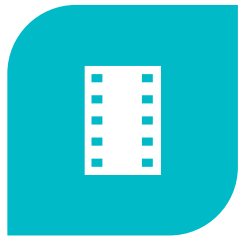
Ocular Surface Abnormalities

ETIOLOGIC DRIVER TESTS
Anatomical misalignment
Biomicroscopy e.g. pterygium, LIPCOF / conjunctivochalasis, ectropion / entropion, lagophthalmos
Neural dysfunction
Corneal sensation
In vivo confocal microscopy
Cellular damage / disruption
Cornea (fluorescein)
Bulbar Conjunctiva (lissamine green)
Lid wiper epitheliopathy (lissamine green)
Inflammation / oxidative stress
Bulbar conjunctival hyperemia
Inflammatory markers



EVIDENCE-BASED INTERVENTIONS
Anatomical misalignment
Surgical options
Neural dysfunction
Tear supplementation / stabilization
Surgical options (punctal occlusion)
Cellular damage / disruption
Oral nutrition (vitamin D3)
Tear supplementation / stabilization
Pharmacological tear stimulation / restoration
Device tear stimulation / restoration
Topical lid hygiene
Topical anti-inflammatories
Ocular surface regenerators
Surgical options (punctal occlusion)
Inflammation / oxidative stress
Oral nutrition (omega 3 / vitamin D3)
Tear supplementation / stabilization
Pharmacological tear stimulation / restoration
Device tear stimulation / restoration (IPL)
Topical lid margin hygiene / debridement
Topical anti-inflammatories
Ocular surface regenerators (amniotic membrane)
Surgical options (punctal occlusion)

Three Treatment Algorithms



TEAR FILM

EYELIDS / MGD

OCULAR SURFACE / INFLAMMATION

TREAT IN PARALLEL

Tear Film Management

- Preservative-free lubricants
- Lipid-based drops
- Osmoprotectants
- Tear conservation (punctal plugs, moisture chambers, sclerals)

Eyelid / MGD Management

Core therapy –

Heat & lid hygiene

Blink training

Escalation -

IPL / thermal devices

Demodex therapy

Short course topical anti-inflammatory

Ocular Surface Inflammation

Short-term steroid pulse

Immunomodulators

Regenerative therapies

Refer if required eg blood-derived products in refractory disease.

Neurosensory Dry Eye

- Severe symptoms, minimal signs, normal tear metrics
- This is REAL pathology
- Avoid overtreatment
- Educate & validate
- Consider referral for neuromodulatory strategies or when pain dominates

Workflow

Screen → Identify drivers → Combine therapies → Review 4–6 weeks

Monitoring metrics could include OSDI, NITBUT, staining scores, meibography, gland expressibility, patient compliance…

Common Pitfalls

- Drops only
- Ignoring lids
- Overtreating pain
- Poor patient education

Key Take-Home Messages

1. Driver-based care

2. Combine therapies early

3. Symptoms matter

4. Education is treatment


Questions
Thank you