

Young and Bothered-
Ocular Surface Dryness for a New Generation

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for being with us this year.**

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Introduction:
Dr. Lisa Hornick

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Ocular Surface Dryness Review

A multifactorial (condition with many causes) mismatch in the amount and quality of tears provided vs those needed.

DEWS III updated definition: from Tear Film and Ocular Surface Society (TFOS)

"Dry eye is a multifactorial, symptomatic disease characterized by a **loss of homeostasis** of the tear film and/or ocular surface, in which **tear film instability** and **hyperosmolarity, ocular surface inflammation** and **damage**, and **neurosensory abnormalities** are etiological factors."

Classic Risk Factors for Dry Eye

- Age:** more common after age of 50; risk increases each decade after 40 years
- Sex:** more prevalent in women than in men
- Hormonal Changes:** estrogen, progesterone, and even testosterone, and HRT
- Systemic Disease:** Autoimmune, Thyroid Disease/ Diabetes
- Contact Lens Wear:** CL can disrupt the tear film
- Medications:** Antihistamines, antidepressants, diuretics

Gen Z "Zoomers": 13-28 yrs old (born between 1997 and 2012)

Characteristics/ statistics that set this generation apart from others (ie millennial, Gen X, Boomers, Gen Alpha)

- Digital natives: They were brought up using screens and technology.
- Spending habits: Zoomers are budget-conscious but do prioritize self-care. They prefer digital forms of payment.
- Medical Information: 42% of Gen Z rely on social media and influencers for medical information - TikTok, Instagram and YouTube are most widely used. Trust is shifting from doctors to peers.
- Communication style: They often prefer texting/instant messaging vs. email, phone calls and in-person. However, face to face interaction is still valued.

Source: ChatGPT, LinkedIn, McKinsey

Gen Z "Zoomers" - Differences in signs and symptoms from other generations

OSD Signs:

Absence of:
less telangiectasia, thickened lid margin

Presence of:
decreased secretions, corneal staining, low TBUT, protective ptosis (due to excessive screen time and reduced blinking)

Gen Z's dry eye symptoms

- Contact lens and cosmetic intolerance
- Eye fatigue end of day
- Fluctuations in vision
- Unsure of what symptoms mean/ why they are occurring

Gen Z "Zoomers" - Dry Eye Screening and Testing for Zoomers

SPEED or other dry eye questionnaire

Thorough case history - including meds, screen time, cosmetic use and allergies

Surface staining (don't forget the conjunctiva)

Meibomian gland expression

TBUT

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Gut Feelings- The Role of the Gut Microbiome

Microbiome: "the collection of all microorganisms (including bacteria, fungi, viruses, and other microbes) that live in a particular environment, such as the human body, or a specific area like the gut"

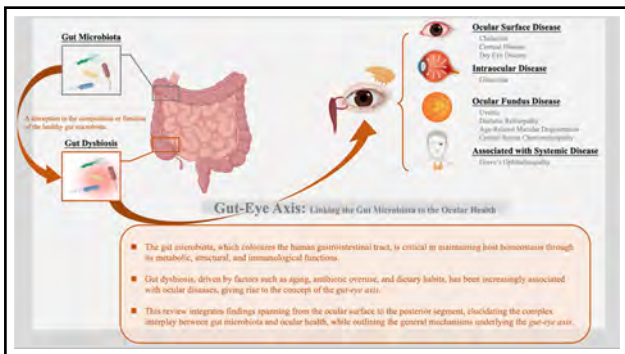
Specific key microorganisms: the dominant bacteria: "Firmicutes and Bacteroidetes, which make up 90% of the gut microbiota. Other important components are the Actinobacteria, Proteobacteria, Fusobacteria, and Verrucomicrobia phyla. Within these phyla, various genera like Lactobacillus, Bifidobacterium, and Bacteroides are prominent. The gut microbiome also includes fungi like Candida, Saccharomyces, and Malassezia."

Key roles of the gut microbiome on the human host:

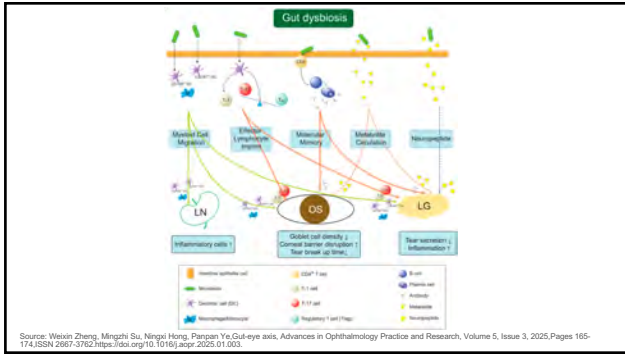
- Nutrient metabolism
- Removal of toxic compounds
- Defense against pathogens
- Strengthening of the intestinal barrier
- Stimulation and modulation of the immune syst



Horizontal lines for notes



Horizontal lines for notes



Gut- Eye Axis Disease States

These conditions have a positive association with Dry Eye:

Food Allergies- Overall Food Allergy (1.4x greater risk), Lactose/Dairy (1.8x greater risk), Celiac. Any Alcohol that is fermented/aged- can trigger allergic response (with histamines) —> concurrent allergic conjunctivitis / chronic inflammation

Food Sensitivities- takes longer to manifest - Gluten, Sugar, Dairy, Alcohol —> allergy or inflammation

Acid Reflux- pepsin- related ocular surface damage: reflux was commonly associated with DED, as about 45% of DED patients had suspected reflux!

IBS (Irritable Bowel Syndrome)- significantly lower tear testing amounts (Schirmer's test and tBUT (P=0.002 and P<0.001 respectively than controls, and increased inflammatory T-cells. Exact cause it not known, but thought to be triggered by food sensitivity/ allergies, nervous system disorders, stress, infections, hormonal changes.

Gut- Eye Axis Disease States

These conditions have a positive association with Dry Eye:

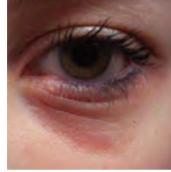
SIBO (Small Intestine Bacterial Overgrowth)- linked to pathogenesis in rosacea, and inflammatory T-cell (Treg and TH17 cells). Secondary to conditions that cause lack of movement: diabetes, gastric bypass surgery, stomach ulcers, too many antibiotics/ narcotics. Requires specific antibiotic treatments.

Crohn's Disease/Gut Autoimmune- associated with altern gut biomirome, especially Sjogren's Disease

Eye Signs of Food Allergy and Gut Dysbiosis

Allergies

- Inflammatory dark circles around the eyes with brownish/red undertone
- Eyelid eczema- flaky red skin, scaliness
- Conjunctival redness and papillary response
- Itching
- Corneal SPK



Intolerance/ Gut Dysbiosis

- Recurrent lid lesions (chalazia)- Family XIII AD3011 group and Catenibacterium genera
- Concurrent blepharitis - Demodex (mites) or Staphylococcus (bacterial)
- Dry eye- Corneal SPK, burning, redness, watery eyes

Gut Questions

Are there any foods that don't make you feel well?

- Dairy and Gluten in particular. Also sugar and spice.
- Fatigue, bloating, heartburn, burping, itch/hives, nausea/ vomiting?
- Timeline- is it hours (Allergy) or next day or chronic (sensitivity)
- Chronic Constipation? Diarrhea?

How does alcohol affect you?

- Redness (particularly cheeks/ ears)? Itching? Intense day after?

Gut Checks- Referral Options

Gastroenterology- severe symptoms, interrupting lifestyle

Allergist- hives and itching, nausea/vomiting

Functional Medicine- intolerances, SIBO

Dietician vs. Nutritionist- can be helpful for balancing nutrients and menu ideas. Dietitians, especially RDs and RDNs, have a strong foundation in nutrition science, typically requiring a bachelor's or master's degree from an accredited program, supervised practice hours, and passing a national board exam. Nutritionists can be helpful but have looser training/ regulation.

Eye Doctor Gut Support

Allergies

Topical Antihistamine/ Mast Stabilizer for allergic conjunctivitis
Careful with topical steroids - kids are more likely to be steroid responders
Topical tacrolimus for eczema

Dysbiosis

Lids lesion/ Blepharitis treatment: lid hygiene, Xdemvy/ lotilaner drops, light-based therapies (IPL/LLL)

Probiotic Supplement (kids and adults): Good bacteria that we can replenish supplements *Streptococcus thermophilus*, *Lactococcus lactis* and *Lactobacillus delbrueckii*

Probiotic Foods: Good bacteria that we can replenish through food

Prebiotic Foods: These are fiber-rich foods that help probiotics flourish by providing a steady, nutrient-rich diet

Probiotics: These are good bacteria that live in our regions through food choices and supplements. To maintain healthy colonization by the organisms listed, probiotics must be taken or added regularly.

Note: If you experience any digestive concerns with taking a probiotic, adjust or discontinue use until you feel better. Consult your doctor if you are unsure.

Sources of Probiotics

Fermented vegetables (sauerkraut, kimchi, pickles, beets, carrots)
Fermented fruits (dried fruits, jams, green papaya, pickled jackfruit)
Yogurt, kefir, sour cream, buttermilk (plain, no added sugar, with live and active cultures)
Kombucha, a fermented beverage
Fermented condiments (homemade ketchup, relishes, saunas, pickled ginger)
Water kefir, coconut milk kefir
Homemade coconut milk or cashew yogurt
Beet kvass
Natto, miso, tempeh, and tamari sauce

Dietitians in Integrative and Functional Medicine

Academy of Nutrition and Dietetics

Prebiotics: These are fiber-rich foods that help probiotics flourish by providing a steady, nutrient-rich diet. When probiotics break down prebiotics in the gut, they produce lactic acid, a short-chain fatty acid, which feeds beneficial cells and protects the digestive tract from harmful bacteria.

Sources of Prebiotics

Asparagus
Avocado
Banana
Dandelion greens
Eggplant
Endive, radicchio
Garlic, leeks, onions
Honey
Jerusalem artichokes (sunchoke)
Jicama
Kefir
Legumes
Whole grains (e.g. oats)
Yogurt
Resistant starch: cooled and parboiled rice, tiger nuts, cooked and cooled potatoes, cooked and cooled legumes (soaked or sprouted)

Skin Issues Deep Dive- Where Eyecare meets Skincare

- Demodex Blepharitis
- Rosacea
- Recurrent chalazion in different locations
- Acne and Accutane Use

Skin Issues- Demodex Blepharitis

Caused by Demodex mites
 Characterized by collarettes on lashes
 Symptoms: **itching**, irritated and red eyes
Can occur in patients of all ages
 Can be overlooked on examination if not careful
 Treated with Lotilaner 0.25% drops BID x 6 week and lid hygiene



Skin Issues- Rosacea

Subtypes:
 Type 1. **Erythematotelangiectatic or Vascular Rosacea**: Areas on the skin with visible blood vessels or telangiectasia.
 Type 2. **Papulopustular or Inflammatory Rosacea**: Along with facial redness, there are often erythematous papules and pustules.
 Type 3. **Phymatous Rosacea (Rhinophyma)**: This subtype most commonly affects the nose. Patients present with tissue hypertrophy manifesting as skin thickening and hyperplasia of sebaceous glands.
 Type 4. **Ocular Rosacea**: Characterized by inflammation of the eyes and eyelids, blepharitis, conjunctival injection, lid margin telangiectasia, chalazion, and hordeolum formation.

Source: <https://modemod.com/articles/2021-july-aug/a-basis-guide-to-ocular-rosacea>

Skin Issues- Rosacea



Associated with and often occurs concurrently with Demodex blepharitis which can cause rosacea
 Early signs/ symptoms in Zoomers: erythema (redness) of cheeks and nose and lid margins, fluctuations in vision

Source: <https://modemod.com/articles/2021-july-aug/a-basis-guide-to-ocular-rosacea>

Skin Issues- Rosacea Facts

Eye care providers may be the first ones to diagnose rosacea

OCULAR ROSACEA FAST FACTS

SYMPTOMS



Ocular rosacea is equally distributed between the two sexes.⁴



Of patients with ocular rosacea, 20% have ocular signs before dermatologic findings.¹



Of patients with ocular rosacea, as many as 90% have only minimal skin changes.¹

Image courtesy of Modern Optometry
Source: <https://modernmod.com/articles/2021-july-aug/a-basic-guide-to-ocular-rosacea>

Skin Issues- Rosacea Treatments

Avoid Triggers

Wear SPF

Oral antibiotics (Doxycycline)

INTENSE PULSED LIGHT (IPL)

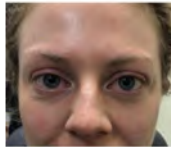


Photo posted with patient permission

Skin Issues- Recurrent Chalazia

Recurrent chalazion (in different locations)

Note: if occurs in the same location need to r/o sebaceous gland carcinoma

Patients of all ages can have recurrent chalazia

Treatment options include:

- Warm Compresses
- Topical and Oral Antibiotics
- IPL -if over 18 years old
- Low Level Light Therapy (LLLT) - any age



Photo courtesy of Dr. Mila Ioussifova

Skin Issues- Acne and Accutane Use

Accutane (Isotretinoin) - oral medication prescribed for severe acne

Helps acne by decreasing the size of sebaceous glands and sebum production.

Side effects: evaporative dry eye due to decreased function of the meibomian glands.

- Studies have found that Isotretinoin can
- decrease the size of meibomian glands
 - increase tear osmolarities
 - increase tear evaporation
 - cause lacrimal gland atrophy



Source: https://eyewiki.org/Ocular_Manifestations_of_Isotretinoin

Nerves and Refractive Surgery

Corneal nerves send messages through a nerve pathway that tells tear glands to release tears in response to evaporation and irritation. They also cue the blink response.

In classic LASIK, the nerves are a cut (blade or laser). In PRK the corneal tissue is chemically removed and then lasered.



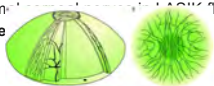
Healthy Refractive Surgery Nerve Healing

Healing Times:

Corneal sensitivity has been studied to return about **6 months** after refractive procedures.

After **PRK**, nerves recover to near pre-operative densities by **2 years** and density does not decrease in the third year.

Both subbasal and stromal nerves in PRK and LASIK flaps recover slowly and **do not return to preoperative densities** after LASIK



Post-Surgery Healing: Blinking and Tear Production

Blink rate of LASIK patients (all the way back to a 2001 study) was **decreased by up to 40%**, and the difference in mean blink rate pre- and postoperatively remained statistically significant at postoperative months 3, 6, and 12. Reduced blinking results in exposure.

Tear production drops - multiple studies have determined with Schirmer and Tear Break-Up times from 3 month to 3 years

More Severe Nerve Impact

Corneal Neuralgia- "Pain without Stain"

Sensation is far worse than the appearance. Patients complain of pain (aching and boring), burning, foreign body sensation and light sensitivity. These manifestations can be debilitating. Depression, fatigue, joint pain and suicidal thoughts can also be present.

A proparacaine challenge test can determine whether pain is coming from local source (corneal) or peripheral source (central nervous system). If proparacaine doesn't relieve symptoms, may need help from pain management specialists.

Neurotrophic Keratitis- "Stain with No Pain"

Sensation is far better than the appearance. Patients complain of reduced/ fluctuating vision. They don't feel SPK or larger corneal defects.

Reduced/ absent corneal sensitivity hallmarks this condition.

Refractive Surgery- Treatment/ Recovery Options

Goals: facilitate calm nerve healing and support ocular surface

[J Ophthalmol. 2017 Aug 15; 2017](#)

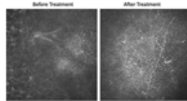
Biologic Healing Options-

- help nerves grow
- Amniotic membranes: cryopreserved have evidence of nerve regeneration
- Autologous serum or Platelet Rich Plasma Eye Drops- these are known to improve nerve density in other corneal disease states (Grafts- Host)
- Growth factor/ Oxervate/ Cenegermin- regrows corneal nerves



Anti-inflammatories-

- calm the inflammatory response, to promote healing
- T-cell/ immunomodulators: cyclosporine, lifitegrast
- Topical Steroids
- Intense Pulsed Light/ Low Level Light



Mechanical

- Punctal Plugs- Bock tears onto the ocular surface
- PROSE/ Scleral Contact Lens- bathe the eye in moisture

<https://ophthalmologymanagement.com/issue/2022>

Better Choices for Refractive Surgery

PRK vs LASIK

Meibomian Gland loss and symptoms (OSDI) were significantly lower among the PRK group than in the LASIK group at 3 months post-op in a mid 2025 study

PRK, nerves recover to near preoperative densities by 2 years and density does not decrease in the third year



SMILE vs LASIK

SMILE refractive surgery seems to cause more vision disturbances than LASIK in the first month post-surgery, but less dry eye symptoms in long-term follow up.

4 IMPACT OF ELECTIVE MEDICATIONS & PROCEDURES ON THE OCULAR SURFACE

- Over-the-counter treatments, including natural products, can have side effects.
- Elective surgeries on or near the eye can cause dry eye.
- If you are considering refractive (laser) surgery, ask if you are eligible for small incision lenticule extraction (SMILE).
- Smaller incision = less nerve damage
- Symptoms of fluctuating vision and blur post-surgery returned to normal after a month
- Fewer dry eye symptoms compared to LASIK in long-term follow up

Gen Z Lifestyle Factors- Screen Use

Our screen time use continues to increase. Younger people use screens for their schoolwork, regular work and entertainment/socializing.

Our blink rate decreases and we have more incomplete or partial blinks when using digital devices.

Normal blink rate is 15 times per minute, when using a digital device it decreases to 5-7 times per minute.

Decreasing blink rates and more incomplete blinks can cause an increase in the obstruction of the meibum in meibomian glands.

This can further lead to **long-term problems** such as gland atrophy.

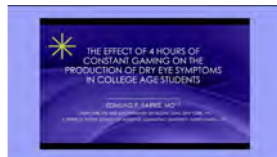
Gen Z Lifestyle Factors- Gaming

Study Take-aways:

36% of the study participants had normal levels of MMP-9 before gaming and **elevated** levels after.

23/41 participants had an **increase in SPEED score** (average 4.82 points increase)

Frequency of symptoms of eye soreness and irritation increased by **3x**



Poster presented at ASCRS meeting 2024

Source: <https://modernod.com/significant-findings/prolonged-gaming-and-dry-eye>

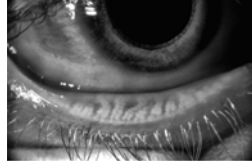
Gen Z Lifestyle Factors- Gamer Case Study

Ex. Case Study- the 16 y/o chronic gamer

16 y/o white male with cc of red, irritated eyes and vision fluctuation. Has played video games since he was 6 yrs old. Typically plays 3-4 hours on weekdays after school and 8-10 hours on weekends. Admits to playing till 2 am after parents have already gone to sleep.

Exam findings: trace MGD and abnormal TBUT. Structural changes (tortuosity) seen on meibography.

Tx: educated patient on the importance of taking breaks from video games. Gave artificial tears, warm compresses and lid hygiene. Educated patient on the chronic and progressive nature of dry eye disease.



Gen Z Lifestyle Factors- Screen Use Recommendations

Take-away: a literature review revealed that the best treatment for digital eye strain is **Omega-3 FA supplementation**.

Other effective treatments include taking breaks, blink reminders, increasing humidity and ergonomics.

Blue light blocking glasses and other types of supplements were **unlikely** to be effective.



Source: <https://contactlensupdate.com/s3.amazonaws.com/uploads/2023/11/ContactLensUpdate.com-TFOS-Lifestyle-Reports-Patient-Handout.pdf>

Gen Z Lifestyle Factors- Vaping

Tear film disruption: reduced tear break-up time with impact on tear lipids

There isn't good US regulation of what is in vaping liquids: 80 chemicals have been identified in e-liquid

Main Ingredients- Propylene glycol and Glycerin as solvents
Nicotine/THC/Cannabinoids

Other risks:

EVALI (E-cigarette or Vaping Use-Associated
Explosion injury with unauthorized modificatio



Vaping Discussions



Ask specifically about vapi
"smoking" is not "vaping"



Educate to NEVER change/alter/adapt
equipment

If associated with dryness, encourage
patient to seek out alternative options
or quitting:



<https://teen.smokefree.gov/quit-vaping/how-to-quit-vaping>

Gen Z Lifestyle Factors- Cosmetics

TFOS Lifestyle Cosmetic Report

Poor regulation of US Cosmetics

11 substances are banned in the United States for use in cosmetics vs.
1300 substance in the European Union.

The following terms have NO regulation:

Hypoallergenic, Natural, pH-balanced, Clinically-Proven, Doctor Recommended

The following terms, while having definitions have NO proven safety benefits:

Organic, Cruelty-Free

Top 10 Most Potentially Harmful Ingredients to the Ocular Surface:

(according to the TFOS report)

1. ***Benzalkonium chloride (BAK)** : toxic, allergen, irritant
 2. **Chlorphenesin** : toxic, allergen, irritant, immunosuppressant
 3. ***Formaldehyde releasing compounds**: toxic, carcinogen, allergen
 4. **Parabens**: toxic, endocrine disruptor, allergen
 5. **Phenoxyethanol**: toxic, allergen, irritant
 6. **Phthalates**: cytotoxic, endocrine disruptor, neurotoxic, some banned in Europe
 7. ***Prostaglandin analogs**: MGD, orbital fat loss, hyperemia, eyelid ptosis
 8. ***Retinoids**: toxic to meibomian glands
 9. **Salicylic Acid**: irritant, restricted use in Europe
 10. **Tea Tree Oil**: potentially toxic to meibomian gland epithelial cells, allergen
1. ***Acrylates** (Dr. Hornick's addition): Be aware of allergic potential, can cause contact dermatitis

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6929220/>

Gen Z Lifestyle Factors- Cosmetics, Don't forget the Males

Males are also interested in cosmetics - including skincare and makeup

Case: 19 y/o male WM with cc: dry, irritated eyes

Exam findings: make-up and debris on lids and lashes, 1+ MGD and abnormal TBUT, trace papillary reaction to conjunctiva

Tx: Educated patient on importance of removing eye makeup at night with a safe eye makeup remover. Also educated him on the importance of lid hygiene and replacing his eye makeup on a regular basis. Recommended PFATs and PF eye makeup remover.

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Gen Z Lifestyle Factors- Cosmetic Removers

Main types of makeup removers all disrupt the tear film temporarily with different risks

Oil- fewest ingredients, but most temporary blur

Oil-free- full of surfactants that can cause dryness and eczema

Micellar- watch other ingredients

No we have safer brands designed by eyecare professionals

Cleanest Option: Microfiber Clothes

No need for chemical cleaning

Need to be kept clean- watch for detergent ingredients/fragrance, etc.

Combines well with other removers (double cleanse)



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Gen Z Lifestyle Factors- Lash Craze and Cosmetics

A study by Amador et al.(2015) showed the optimum length for eyelashes to be 1/3 the eye width. This is to keep eyes healthy.

Lashes that are not the correct length (too long) can actually divert airflow, allergens, and debris directly to the ocular surface.

The elongation trend is NOT healthy.

A 2022 Mintel report indicates that 33% of Gen Z women use false eyelashes, compared to 17% of women overall.

In the US, the top consumers for lash extensions are females aged 18-34 years old, comprising 51% of the industry.

Horizontal lines for notes

Elongation Methods- Synthetic Lashes



Fake Lashes: Applied by consumer at home w/ glue or magnets/metallic liner

Eyelash Extensions: Applied by a professional
Ingredients: formaldehyde, acrylates, latex, metallic (iron) fragments, fragrances

Complications: Allergic contact dermatitis, chalazia/hordeola, blepharo/ keratoconjunctivitis, lash-fall, and abrasions secondary to application/removal

Photo credit: Dr. Tracy Doll

Elongation Method- Eyelash Growth Serums

Eyelash growth serums (ELGS) can contain ingredients that are potentially detrimental the ocular surface, including actual or synthetic prostaglandins (PGA).

PGA ocular side effects: conjunctival hyperemia, skin or iris hyperpigmentation, and even orbital fat displacement (loss)

OTC options can contain synthetic PGA with identical side effect to the pharmaceutical option. Unlike a pharmaceutical, cosmetic companies are not required to list these potential side effects in their packaging.

Isopropyl cloprostenate is one of the most common active ingredients in the OTC lash growth serums. To identify a potential synthetic PGA, look for the "prost" in the list of ingredients.

Growth Serum Alternatives

Safer ingredients for healthy growth = Polypeptides

Myristoyl Pentapeptide-12/-16/-17

Myristoyl Octapeptide-1

Copper Tripeptide-1

Read the labels: These PGA-FREE versions can still contain other irritating ingredients, including parabens, formaldehyde derivatives

Think about formulations that do double duty- microbiome control + growth support- there is a version that contains okra solution that helps keep mites and bacteria populations

Lash Craze- Chemical Soup

Lash Lift/ Perm: goal is curled lashes
Hydrogen peroxide, thioglycolic acid

Lash Tint: goal is dark lashes
Hydrogen peroxide, ammonia



BOTH lift and tint can be done together, usually tint before lift

Complications: Allergic/ toxic keratoconjunctivitis, chemical burn, trauma

Treatment: topical steroids, cryopreserved amniotic membranes

Gen Z Lifestyle Factors- Eyelid Tattoos

Can look like a line or dots between lashes

Black, white, and colored inks contain metallic ingredients, which can be allergy inducing:

Black Ink:
Iron oxide, carbon nanoparticles, aluminum Silicate

White Ink: Lead carbonate, titanium dioxide, barium



Complications:

Bruising, swelling, infections, scarring, keratitis.

Pigment FADE/ SPREAD- does not last forever

A study by Lee et. al also found association with meibomian gland dysfunction (MGD).



Tips for Healthy Ocular Cosmetic Use

- Remind the patient to remove all eye makeup before bed.
- Be aware of potential **chemical** sensitivities or allergies to ingredients. This can sometimes be tested by an allergist.
- Procedures like lash lifts/perms and tattoo eyeliner can also be toxic to the ocular surface.
- Don't use expired makeup and replace makeup regularly.
- Never share makeup with friends or family.
- Opt for "eye-friendly" brands that have been vetted by eye care providers to reduce potentially toxic ingredients. Look for PF if possible.



Summary and Wrap-Up

Zoom in on Zoomer differences in OSD symptoms and presentation:

They may have more mild signs and greater symptoms. Screen patients for dry eye disease using a questionnaire and meibography imaging (even young patients can have changes). Many are not educated on DED and don't yet know what their symptoms mean.

Communication Enhancers with Gen Z:

Use digital communication tools (ex. Texting vs. phone calls). Use social media platforms to educate- Instagram, TikTok and YouTube are best. Put the trust back into the doctor.

Educate:

Be sure to educate patients that DED is chronic and progressive. They need to keep their eyes healthy for many year to come! They understand the importance of self-care and are willing to make that a priority.

Thank you and Questions

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