LASHING OUT: DANGEROUS BEAUTY TRENDING
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Dr. Doll and Disclosures

- Dr. Doll coordinates the college’s Ocular surface Dryness Center of Excellence, called Pacific Dry Eye Solutions
- Dr. Doll is has been a consultant or speaker for the following companies:
  - Allergan
  - Alcon
  - BioTissue
  - Novarits
  - Johnson and Johnson
  - Sun
Dr. Doll only supports diagnostics and therapeutics that work!
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Eyelashes are Growing in the Market

- Salon and in-the-home eyelash augmentation procedures are projected to continue upward growth in the market.
- False eyelashes alone are expected to bring in approximately $1.883 billion dollars by the end 2024.
- In a market research of over 1,292 women, 44% of participants experienced negative feelings when not being able to wear make-up.

False Eyelash Application Basics
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- Types: strip lashes, individual flare lashes, and single individual lashes
- Materials: real hair or synthetic materials
- Application 1: false lashes are applied at the lid margin above the existing lashes with glue/adhesive

False Eyelash Magnetic Application Methods

- Application 2: Small magnets sandwich real lashes between a set of upper and lower false lashes
- Application 3: Magnetic false lashes attach above the lash line to a thick line of metallic-based eyeliner.

Potential Complications

- False lash glues often contain harsh ingredients with higher allergenic properties, including formaldehyde and latex, and fragrances.
- False lashes have been associated with allergic contact dermatitis, blepharoconjunctivitis and abrasions secondary to application, removal, and lash-fall.
- Magnetic lash risks are primarily application abrasion and lash-fall due to weight of the magnets.
- Metal allergies could be a risk with the eyeliner version.

Healthier False Eyelash Practices

If the patient will NOT give up this beauty practice
- Use of glues that do not contain formaldehyde
- Wear of "natural length" and partial strips instead of strips that extend the full lash line.
- Take breaks in false lash wear or reserve only for special occasions.
- Patch Test: Placing a small amount of glue or metallic eyeliner on the inside of the wrist to alert of potential allergies before a contact dermatitis occurs on the eyelid.

Eyelash Extensions

- Materials: real hair or synthetic materials
- **Application:** Gluing of a single hair or synthetic lash to the existing anatomic eyelash. This is a long process, taking a trained esthetician between one to three hours to complete the full process of applying 50 to 200 extension lashes individually with forceps.

9 □ Video

10 □

11 □ Extension Filling
- Extensions need to be re-done or “filled” every 2-4 weeks for the best look, in order to replace lashes that have fallen as part of the natural life cycle of an eyelash.
- In order to “fill” extensions, old extensions must first be removed.
- Removal is often achieved by using ocular-irritating glue solvents combined with fragrances.
  - Even with the best removal process, some of the remover will make its way to the ocular surface. A closed eye is not an air or water-tight seal.

12 □ Extension Complications
- Hygiene may become an issue, as these lashes are meant to be worn for weeks at a time and are costly at $120 to $350 for a full set.
- Extensions have the same potential complications as false eyelashes, with added documented infective risks of chalazia/hordeola, and blepharitis.

13 □ Healthier Extension Practices
- If a patient will NOT give up extensions:
  - Request glues that do not contain formaldehyde
  - Request natural lash lengths
  - Request removers that are oil-based
  - Patients need to practice lid hygiene and be reminded that extensions are not like “jeans that you don’t wash to protect the look.”

14 □ Extension Cleansers
- Oil-based will loosen glues
- OTC hypochlorous acid (~$20-25)
Non-irritating extension shampoos (~$12-16)
Same ingredients, different bottles
Include a brush
Brands: EB Lashes, Lash Beau, Lyon Lash, Stacy Lash, TailaiMai, VieBeauti

15 How to Remove Extensions Method 1

1. Start by cleaning the lid margins of excess infective debris with a tea-tree oil-based lid cleanser (i.e. Oust™ OCuSOFT® Demodex, We Love Eyes™, Tranquileyes™, or SteriLid® Foam).
2. Liberally apply a non-irritating oil such as argon, jojoba, fractionated coconut, or macadamia nut to the lid margin and lashes.
3. Have patient close eyes for 5 minutes under a heated micro-bead eye mask lined with a light cloth. The combination of heat and oil will loosen the glue bonds.
4. Use a little mechanical action and jeweler’s forceps to remove the extensions.

16 How to Remove Extensions Method 2

Should extensions not loosen with the previous materials, you can also obtain the same lash solvents and eye protecting pads used by salons online
These solvents are will be irritating
Avoid solution on the ocular surface as much as possible

17 How to Manage Complications

Blepharitis
50% TTO application or ZEST kit
Contact Dermatitis
Topical Steroid gtts or ung
Toxic Keratoconjunctivitis
Topical Steroids gtts
Amniotic Membranes (for corneal involvement)

18 How to Manage Complications
Infective Keratoconjunctivitis
  ▶ Topical antibiotic gtts/ ung
Chalazia/ Hordeola
  ▶ Hot compresses
  ▶ Oral antibiotics
  ▶ IPL

**19 Eyelash Perming/Lifting**
▶ The goal with a lash lift is for the natural eyelashes to curl up and outward.
▶ Eyelashes are wrapped around a metallic or plastic rod coated in adhesive (or an adhesive is provided to paint on the rod). Some kits will even use plastic “clips” to keep lashes in place.
▶ A perming solution is applied, followed by a neutralizer for a total 10-15 minutes

**20 Perming Complications**
▶ The perming and neutralizing solutions contain the highly ocular toxic active ingredients, hydrogen peroxide and thioglycolic acid, in addition to other irritating additives.
  ▶ These same ingredients are included in traditional perming solution for hair.
▶ The main risks involved in lash lifting are toxic keratoconjunctivitis and allergic reactions.

**21 Healthier Perming Practices**
▶ Patients should avoid lash lifting due the potential risks.
▶ However, if a patient is adamant about attempting a lash lift, this procedure should only be performed by a highly trained professional esthetician in order to mitigate the amount of perming and neutralizing solutions on the ocular surface.

**22 How to Manage Perming Complications**
▶ Patients should be educated to come in immediately if significant irritation ensues.
▶ If a patient presents with a reaction within 24 hours, you can flush ocular surface and lashes. Water deactivates perming solution,
within the first 24 hours.
► Unfortunately, after 24hrs, allergens will stick around.
► Patients who experience a “lash lift gone wrong,” will likely need to be treated similar to a mild basic chemical burn (topical steroids, antibiotics, amniotic membranes).
►

23 □ Lash Tinting
► Permanent dyes are applied to darken the eyelashes.
► Similar to lash tinting, the lashes are wrapped around a sticky plastic or metal rod and permanent dye is applied and allowed to set.
► Many times BOTH lash perming and tinting are done at the same visit, usually lashes are dyed after the perming.

24 □ Lash Tint Complications
► Ocular toxic and allergenic ingredients commonly included in lash tinting products also are hydrogen peroxide, ammonia, dyes, and fragrances.
► The main risk here is an allergic reaction, with natural life cycle of an eyelash at about 3-6 months.
►

25 □ Lash Tint Better Practices/
Managing Complications
If patient refuses to give up lash tinting
► Lash tinting should be performed by a highly trained esthetician who is willing to “patch test,” prior to the tint.
► Stripping the dye out comes with risk of permanent damage to the follicle. You can’t remove the dye.
► The best option here is anti-inflammatory control with topical steroids until the lash lifecycle has turned over.
►

26 □ DIY?
► While eyelash extensions, tinting and lifting are all highly recommended to be done by a licensed esthetician, all the products necessary to “do it yourself,” are easily found for purchase online without an esthetician or medical license.
With these lash procedures running hundreds of dollars, the motivation for home attempts is high, as is the risk for untrained mistakes.

27 DIY DON’T

28 Eyelash Growth Serums: Prescription

Latisse® (bimatoprost 0.03% by Allergan) was FDA approved in 2008
- The crucial side effect of darker and thicker eyelashes with use of this prostaglandin analog, first prescribed for glaucoma
- Daily application of the clear solution along the lash line targets the anagen phase of eyelash growth cycle, causing longer, thicker, and more melanin deposition in the eyelash. It’s also thought to increase the number of eyelashes in the follicle.
- Latisse® is FDA approved for hypotrichiasis and also indicated for trichotillomania, chemotherapy-induced eyelash loss, and alopecia areata

29 Just get it online…

- Telemedicine.
- Get a Lattise® Rx without a slit lamp exam
- May not be an eyecare provider
- They will auto-ship
- All safety data is listed on the websites.
- Rory.com, Apostrophe.com, SkinSolutionsMD.com
- There are plenty of “dirty websites” that’s sell it without an Rx or “generic” bimatoproast

30 Side Effects of Prostaglandin Analogs

- Skin and iris pigmentation
- Conjunctival hyperemia
- Pruritus (itching)
- Lash loss
- Lowered intra-ocular pressure.
- The topical eye drops prescribed for glaucoma, have also been documented to change orbital fat placement.
OTC Lash Growth Serums

- OTC options can contain synthetic prostaglandins 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.
- I encourage you to Google “Before and After”
- Synthetic prostaglandins can be difficult to spot unless you are familiar with their common names. The key is to look for the letters “prost” as an indicator of potential synthetic prostaglandin ingredient (One of the most common synthetic prostaglandins is isopropyl cloprostenate)

Synthetic Prostaglandin Lash Serum Ingredients

- Ethylcloprostenolomide
- Methylamido dihydro noralaprostal
- 17-Pheyl Trinor Prostaglandin E serinol amide

Similar ingredients...

Non-PA Eyelash Conditioners

- These are polypeptide and lipopeptide formulations of amino acids that support eyelash growth.
- Even the lipopeptide and polypeptide versions are not necessarily without risk, containing other irritating ingredients, so it is still important to read the ingredient list.

Better Practices for Lash Growth Serums

- Any patient using a prostaglandins lash serum should be followed regularly to monitor ocular health, as they would with the use of the topical glaucoma prescription.
- Users either love discontinue these serums, so it’s up to us to screen out those who may experience side effects.
- Patients with chronic ocular inflammatory conditions, including dry eye disease states, should avoid prostaglandin lash serums.
Choose conditioning options that do not include prostaglandins.

36 Is Longer Really Better?
- The right length to maintain proper aerodynamic flow is the same in both animal and human species.
- Eyelash length should be 1/3 the eye width.
  - Smaller eyes should have shorter lashes.
- Lengths that exceed this ratio could end up funneling air and debris right to the ocular surface.
- Eyelashes should be kept to natural lengths to facilitate the best ocular health.

37 Tattooed Eyeliner
- The ink used in tattooing is not regulated and not necessarily consistent between professional tattooing estheticians.

38 Tattooed Eyeliner Pigment Fade or Spread
- Tattooed eyeliner does not last forever.
- Most tattoos also require touch-ups over time as the ink fades.
- Black eyeliner fades to a bluish tinge, making it easy to detect.
- In some cases, the ink does not always stay contained in the target location, leading to pigment spreading.

39 Complications with Eyelid Tattooing
- Black, white ink, 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 sulfate
- In addition, tattooing comes with potential complications of bruising, swelling, infections, scarring, granuloma formation, photo-toxicity, and lamellar keratitis.

40 Evidence-Based Link to MGD
- A study by Lee et. al also found association with meibomian gland dysfunction (MGD).
Tattooed patients demonstrated reduced tear break-up times, loss of meibomian gland architecture, and increased corneal staining. The impact of the concussive damage, in addition to chemical toxicity, is also theorized be to contributory to MGD.

41 Better Eyelid Tattooing Practices
- Permanent make-up on the eyelid should be avoided, as this is not a procedure that can be reversed.
- Patients who have already undergone tattooing should not repeat the process.
- Note that iLux (Alcon) and on-the-eye lid Intense Pulsed Light (IPL) should not be performed over tattooed ink as the light energy could be over-absorbed by the technologies and lead to thermal injury.
- The Toyos setting which are performed on the cheeks and nose are safer.

42 Enhancements DON’T Replace Make-Up
- These procedures are rarely replacements for make-up, but rather additive.
- For example, mascara is often used in conjunction with false eyelashes to help “blend” the false lashes with real lashes.
- Eye cosmetics themselves, can contain allergenic and toxic additives.

43 What’s in Make-Up
- Websites
  - Skin Deep: https://www.ewg.org/skindeep/
- Apps:
  - Think Dirty App
  - Ingredio Beta Ingredients Scanner App
  - INCI Beauty- Analysis of Cosmetic Products App
Case 1: The DIY Lift

35-year old Asian Female, LL, presents with the chief concern of a bilateral eye infection secondary to use of an “expired” lash perming kit four days prior.

She had purchased the kit on a deep discount, thinking the ingredients would “still be active.”

LL reports bilateral dull to sharp eye pain, photophobia, redness of her eyes and lids, and stringy mucous discharge.

She visited a primary care provider 2 days ago who prescribed her a topical sulfa-based antibiotic. The antibiotics and artificial tears she is using every hour are not reducing her symptoms.

External Examination

Scaly, 2+ edema and erythema of all eyelids

Left eyelid is stuck shut with dried, white, sticky mucous upon waking

Once the mucous is loosened and removed with a tea-tree oil-based lid scrub, a 3+ diffuse keratitis and accompanying conjunctivitis is evident.

The Kit

The kit includes two tubes with expiration dates 8 months prior to her purchase and use.

Curling cream containing thioglycolic acid

Conditioning cream containing hydrogen peroxide

This kit uses clips to keep lashes in place.

LL confirms that she attempted to perm her own eyelashes and had gotten contents of both tubes in her eyes.

Diagnosis

In this case, the active ingredients in the lash perming kit proved to still be active, leading to a bilateral toxic keratoconjunctivitis and allergic contact dermatitis.
DIY Treatment
- LL is immediately placed on topical steroids (pred acetate 1%) tid, with gentle lid scrubs with hypochlorous acid.
- She declines cryopreserved amniotic membrane as she needed to return to work for the next few days and can’t “look” bad.
- LL questions whether she could wear eye make-up to help her appearance and is told to avoid all eye cosmetics for the next 3 days until she could be seen for a follow-up. She then questions “what about just mascara” and is again told no eye make-up.
- LL opts to wear cute fashion sunglasses instead.

Follow-up
- Within one week the corneal staining has reduced to down to trace, and the eyelid edema has resolved. She still has some mild scaling of the eyelid skin.
- LL does admit to wearing “light eye-make-up,” the day before
- LL begins a steroid taper and is urged to continue daily hypochlorous acid lid scrubs for the next week at night.
- She once again questions about using eye make-up and is strongly urged to stay eye-make-up free for one more week.
- We discuss non-prostaglandin eyelash serums to condition natural lashes as an alternative to lash perming.

The Battered Eyelid
- 55 yowf presents for a dry eye work-up, with CC of burning at end of day with computer-based job
- Stated that she did not wear any cosmetics other than occasional mascara

It’s Not a Bruise
- Eyeliner tattoo x 10 years
- Was originally a purple line
- Has spread higher and turned into a bruise-like color fading to blue
Lower eyelid was also inked
MGD
- Thickened secretions
- Telangiectasia
- Truncation of glands on meibography, but not gross loss

**MGD Therapy**
- Educated to never repeat the tattooed liner
- Run her current cosmetic through cosmetic checker apps
- Treated like typical MGD patient
  - OM3/GLA supplement
  - TTO –based lid scrubs every other day
  - IPL x 3 with Toyos settings (no lids), followed by LipiFlow
  - Consider starting chronic topical anti-inflammatory drop

**History Recommendations**
- Ask about make-up and eyelash enhancing practices on all patients with evident make-up or OSD risk factors
- Consider putting enhancement questions on your health questionnaires
- Watch for other body cosmetic enhancements- these could signal that a patient is enhancing lashes as well.

**Not just women**

**Thank you!!**
- Stay safe and beautiful!

**Sources**


Sources 2


