

## Four Hidden Lifestyle Risks Associated with Dry Eye

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### Outline

- I. Introduction/ Ocular Surface Dryness as a Disease-State
  - A. Combination of Inflammation and Evaporation
  - B. DEWS II Definition
  - C. TFOS "A Lifestyle Epidemic: Ocular Surface Disease."
  - D. Well-Known Risk Factors
    - 1. Age, Gender, Systemic Conditions, Ocular Surgery, CL wear
  
- II. Sneaky Risk Factor 1: Bad Beauty/ Cosmetics
  - A. Lack of Cosmetic Regulations and Irritating Ingredients
    - 1. Lack of current federal or local regulation
    - 2. Preservatives, Pigments, Emollients
  - B. Lash Serums- the cosmetic you can't see
    - 1. Prostaglandin Analog Serum Side Effects
    - 2. Healthier Alternatives
  - C. Lash Enhancements
    - 1. Complications (infective, trauma, chemical)
    - 2. Removal Technique in-office
    - 3. Healthier alternatives for patients
  - D. Removers
    - 1. Surfactants and Oils (new data on tea tree oil)
    - 2. Healthier alternatives for patients
  - E. Improve your Case History on Cosmetics
    - 1. Specific Questions for Cosmetics
  - F. Better choices for patients
    - 1. Resources for checking ingredients
    - 2. Cosmetic Turn-Over Times
  - G. Case
  
- . Sneaky Risk Factor 2: Vaping/ E-Cigarette Use
  - A.
    - A. E-Cigarette/ Vaping Basics
      - 1. Difference from classic smoking
      - 2. The "E" part of E-Cigarettes
    - B. Basic Mechanism
      - 1. Stats/ Industry Info on E-Cigs/Vaping
      - 2. Demographics: Younger patients
    - C. Appearance/ Packaging
  - D. Connection to OSD

1. Altered Tears
  - a. Reduced NIKBUT, TBUT, Tear Meniscus Height
2. Correlation with higher voltage
3. Associated ingredients, including formaldehyde
- E. Improve your case history on E-Cigs/ Vaping
  1. Better questions to ask about E-Cigs/ Vaping
    - a. brands and voltage
- F. Recommendations to patients
  1. Resources for cessation counseling
- G. Case

#### IV. Risk Factor 3: Screen-Time

- A. Stats on Current Screen-Time
- B. Effect on the Ocular Surface
  1. Reduction in Blinking
  2. Evaporative Dryness
- C. Number of typical hours
  1. Increase due to COVID-19
  2. Connection to Pediatrics
- D. Blue-Light Connection
  1. Current data on blue light
- E. Improve your case history on screen-time
  1. Ask about ALL types of devices
- F. Healthier Recommendations to patients
  1. Breaks
  2. Use of Blink-Reminder Apps
  3. Work-space modifications
  4. Working distance, Humidity, Eyewear
- G. Case

#### VI. Sneaky Risk Factor 4: No Sleep Tonight

- A. Sleep disorder connection to ocular surface
  1. Evidenced-based damage: tear secretion, corneal epithelial cell defects/ apoptosis/ squamous metaplasia, corneal sensitivity alternations.
- B. Sleep Apnea
  1. Floppy Eyelid connection
  2. Oxygen supply
  3. CPAP difficulties
- C. Inadequate Lid Seal
  1. Anatomical vs. surgical
- D. Lid Testing
  1. Lid Seal: Korb and Blackie Evidence
  2. Snap-back Test

- E. Healthier Recommendations for Patients
  - 1. Sleep Tite Sleep Rite, Sleep masks, gels and ointments
  - 2. Tips for improved sleep
  - 3. Referral for Sleep Studies
- F. Case