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Surprising Eyelid Issues Leading To Contact Lens Discomfort

Dr. Elise Kramer

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WELCOME!

 Host: Dr. Jennifer Stewart

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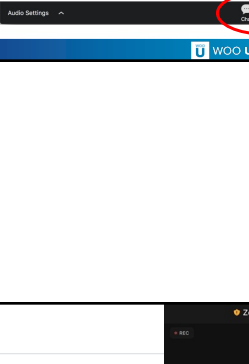
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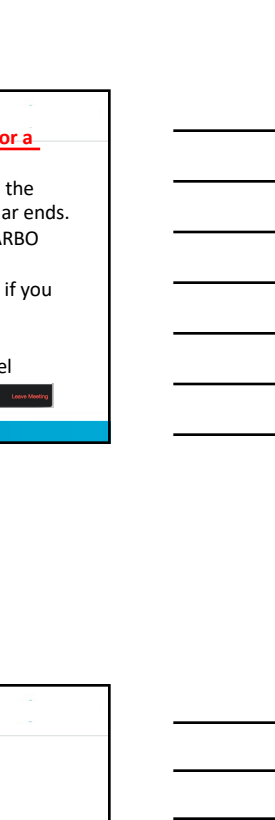
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A screenshot of the Zoom interface showing the bottom toolbar. The 'Chat' and 'QA' buttons are circled in red. The Zoom logo and 'WOO UNIVERSITY' are visible at the bottom.

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A screenshot of the Zoom interface showing the top toolbar. Two white arrows point to the 'Zoom' and 'Leave' buttons. The Zoom logo and 'WOO UNIVERSITY' are visible at the bottom.

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Speaker Bio –

- Dr. Elise Kramer is a residency-trained optometrist in Miami FL who specializes in ocular surface disease and specialty contact lens design and fitting.
- Her Doctorate degree was awarded in Optometry from the Université de Montréal in 2012. During her fourth year, she completed her internship in ocular disease at the Eye Centers of South Florida and went on to complete her residency at the Miami VA Medical Center. Her time there included training at the Bascom Palmer Eye Institute, the nation's top eye hospital. After her residency, Dr. Kramer became a fellow of the [Scleral Lens Education Society \(SLES\)](#) and now serves as the vice president for the SLES. Dr. Kramer is also vice president of Women in Eyecare (WIE), a member of the [American Optometric Association \(AOA\)](#), the International Association of Contact Lens Educators (IACLE), a Fellow of the [American Academy of Optometry \(AAO\)](#) and of the the British Contact Lens Association (BCLA).
- Dr. Kramer has published several important articles and reviews and is participates in clinical research trials. She enjoys lecturing all around the world in several different languages about ocular surface disease and specialty lenses




A circular portrait of Dr. Elise Kramer, a woman with dark hair, wearing blue scrubs. The Zoom logo and 'WOO UNIVERSITY' are visible at the bottom.

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Financial Disclosures

- Allergan/Abbvie
- Dompe
- Euclid Vision Group
- Tarsus
- Visionary Optics





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**All financial relationships
have been mitigated.**

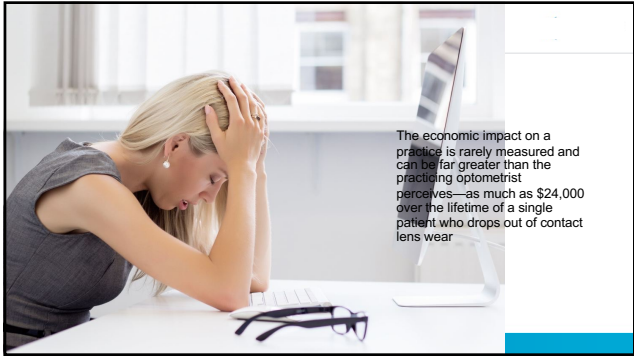


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- The causes of CL dropout are frequently misunderstood and underestimated
- Little is actively being done by the average practitioner to avert this situation



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Number One Reasons for Contact Lens Dropout				
Number one reason for dropout	U.S.	Americas (includes U.S.)	Asia/Pacific	Europe/Middle East/Africa
Comfort/fit	50.0%	52.9%	41.9%	45.6%
Vision not as good as with glasses	15.9%	14.2%	3.8%	17.5%
Expense	12.3%	11.6%	11.9%	17.5%
Difficult to put in and take out	7.2%	8.4%	7.5%	7.0%
Bifocal/trifocal lenses don't work as well as eyeglasses	5.1%	4.5%	0.6%	0.0%
Inconvenient to wear	5.1%	4.5%	10.0%	0.0%
Lens care/cleaning too time consuming	2.2%	1.9%	0.6%	0.0%
Fear of or history of eye infections	0.7%	0.6%	17.5%	3.5%
Lens care/cleaning too difficult	0.7%	0.6%	0.6%	0.0%
No selection	0.7%	0.6%	1.3%	1.8%
Need to clean frequently	0.0%	0.0%	3.1%	1.8%
Doesn't correct for astigmatism	0.0%	0.0%	0.6%	1.8%
Easy to lose	0.0%	0.0%	0.6%	1.8%
Need for regular eye exams	0.0%	0.0%	0.0%	1.8%

1. Rumpakia, New Data on Contact Lens Dropouts: An Inter-national Perspective, Review of Optometry, 2010, <http://www.reviewofoptometry.com/content/0/contact-lenses-and-solutions/18929>.

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What Causes Contact Lens Discomfort?

- Meibomian Gland Dysfunction
- Anterior Blepharitis
- Demodex Blepharitis
- Dry Eye Syndrome
- Allergy
- Dermatological Conditions
- Contact Lenses


Interacting Pathologies

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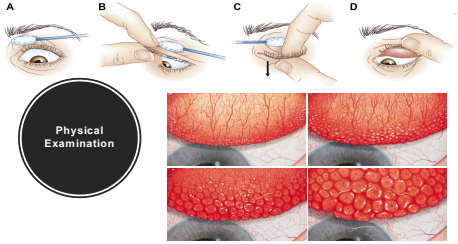
Allergic Conjunctivitis

- Affecting 20% of the population
- Symptoms :**
 - Itching, redness, and swelling
 - Often occur simultaneously with nasal symptoms
- Significantly impacts QoL
- Often underdiagnosed and undertreated
 - Only 10% with symptoms seek medical attention
 - Most manage with OTC medications and complimentary nonpharmacological remedies



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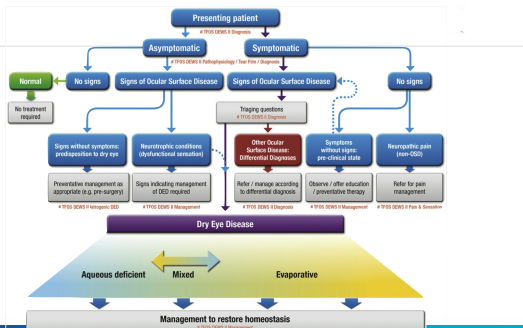
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Physical Examination

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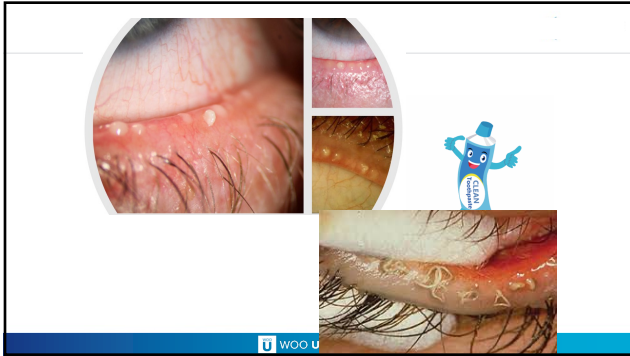


Dry Eye Disease

Management to restore homeostasis

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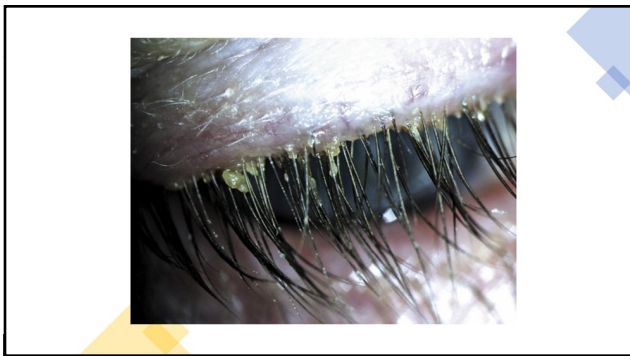
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DEMODEX BLEPHARITIS | WHAT IS IT?

Demodex blepharitis (DB) is a common eyelid margin disease caused by an overgrowth of *Demodex* mites. It is characterized by collarettes, eyelid redness, inflammation, and ocular irritation.^{1,2}

It is highly prevalent, but underdiagnosed, affecting ~25 million eye care patients in the United States.^{3,4}



Demodex folliculorum is 0.3-0.4 mm in length and colonizes the base of the lash follicle.^{3,4}



Demodex brevis is 0.2-0.3 mm in length and colonizes the meibomian gland.⁵

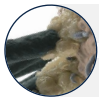
1. Demodex M et al. Clin Ophthalmol. 2016;10:17-23. 2. Wong M et al. Eye Contact Lens. 2003;31:287-9. 3. Baerlin M et al. Clin Ophthalmol. 2012;6:1234-1244. 4. Choudry M et al. Clin Ophthalmol. 2012;2:219-221. 5. Cullen M. Demodex folliculorum blepharitis. Trans Am Ophthalmol Soc. 1967;65:944-952. 6. Wang H et al. Ophthalmol. 2004;111:188-191.

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COLLARETTES ARE A PATHOGNOMONIC SIGN OF DEMODEX BLEPHARITIS

100% of patients with collarettes have Demodex blepharitis.^{2,5}



Collarettes, or cylindrical dandruff, are translucent, solidified excretions that form a cylindrical collar that cuffs around the base of the eyelash follicle.^{1-3,5}

Collarettes grow out of the lash follicle, and thus are anchored at the base of the eyelash with its growth.⁴



Collarettes are composed of regurgitated undigested mite waste combined with epithelial cells, keratin, mite eggs, and secreted proteases and lipases.^{3,4}

1. Zhang XC et al. Ophthalmol Physiol Opt. 2010;30(10):1089-1102. 2. Gao YF et al. Invest Ophthalmol Vis Sci. 2003;44(2):889-896. 3. Horman SR et al. Clin Optom (Austl). 2016;15(7):44. 4. Gao YF et al. Invest Ophthalmol Vis Sci. 2003;44(2):889-896. 5. Horman SR et al. Clin Optom (Austl). 2016;15(7):44.

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DEMODEX BLEPHARITIS CAN BE DIAGNOSED DURING SLIT LAMP EXAMINATION

Asking a patient to **LOOK* down** during a slit lamp examination can reveal diffuse collarettes and misdirected or missing lashes that are strong signs of Demodex blepharitis.^{1,2,7}

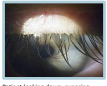
+ Collarettes are hardened excretions around the base of the eyelashes visible during slit lamp examinations^{1,2}

⬇ Collarettes can be identified when the base of lashes on the upper lid are exposed as the patient looks down.^{1,2}

! Collarettes may be missed during a slit lamp exam, even with a lid lift, if a patient is looking straight ahead⁷



Patient looking straight ahead



Patient looking down, exposing base of lashes and collarettes

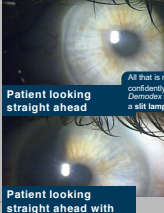
*American Society of Cataract and Refractive Surgery (ASCRS) Pre-Operative Checklist Surface Sterilization (SSD) algorithm. Clinical Exam (SLP) Look, Lift, and Pull!⁷

1. Horman SR et al. Clin Optom (Austl). 2016;15(7):44. 2. Horman SR et al. Clin Optom (Austl). 2016;15(7):44. 3. Zhang XC et al. Ophthalmol Physiol Opt. 2010;30(10):1089-1102. 4. Gao YF et al. Invest Ophthalmol Vis Sci. 2003;44(2):889-896. 5. Horman SR et al. Clin Optom (Austl). 2016;15(7):44. 6. Gao YF et al. Invest Ophthalmol Vis Sci. 2003;44(2):889-896. 7. Gao YF et al. Invest Ophthalmol Vis Sci. 2003;44(2):889-896.


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Asking Your Patient to Look Down During a Slit Lamp Exam Can Reveal Diffuse Collarettes and Misdirected or Missing Lashes

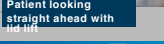


Patient looking straight ahead




Patient looking down

All that is needed to confidently diagnose Demodex blepharitis is a slit lamp.



Patient looking straight ahead with lid lift

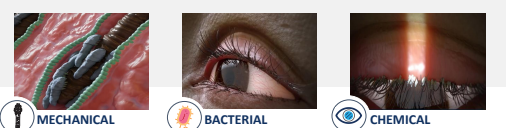


Patient looking down

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DEMODEX BLEPHARITIS | MECHANISMS OF DISEASE



MECHANICAL

Lash distension occurs as Demodex mites attach to follicles.^{1,3,4}

BACTERIAL

Demodex mites carry bacteria on their surface, and inside their abdomen, which may elicit immune responses.^{2,4,6}

CHEMICAL

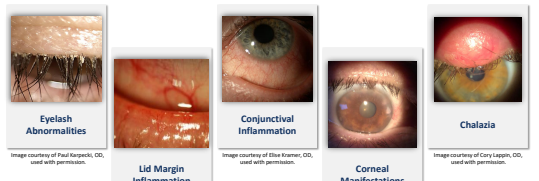
Demodex mites, along with their debris and digestive enzymes, can contribute to inflammation in the eyelid margins and surrounding tissues.^{1,2}

1. Friedman SE et al. Ocul Immunol Inflamm. 2018;26(12):1-7. 2. Rosenheim M et al. Eye Contact Lens. 2013;39(1):1-7. 3. Zhang H et al. Ophthalmol Physiol Opt. 2008;28(10):989-992. 4. Liu J et al. Curr Opin Allergy Clin Immunol. 2012;12(5):545-550. 5. The Eye of the Future. 2016. 6. The Eye of the Future. 2016. 7. The Eye of the Future. 2016. 8. The Eye of the Future. 2016. 9. The Eye of the Future. 2016. 10. The Eye of the Future. 2016.

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MANIFESTATIONS AND CO-MORBIDITIES OF DEMODEX BLEPHARITIS^{1,2}



Eyelash Abnormalities

Image courtesy of Paul Karpicki, OD, used with permission.

Lid Margin Inflammation

Image courtesy of Paul Karpicki, OD, used with permission.

Conjunctival Inflammation

Image courtesy of Elina Kremen, OD, used with permission.

Corneal Manifestations

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Chalazia

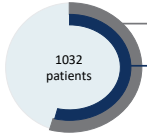
Image courtesy of Cory Lippert, OD, used with permission.

1. Friedman SE et al. Ocul Immunol Inflamm. 2018;26(12):1-7. 2. Rosenheim M et al. Eye Contact Lens. 2013;39(1):1-7.

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PREVALENCE OF DEMODEX BLEPHARITIS IN EYE CARE CENTERS¹



1032 patients

- 59% with dry eye diagnosis
- 58% with Demodex blepharitis

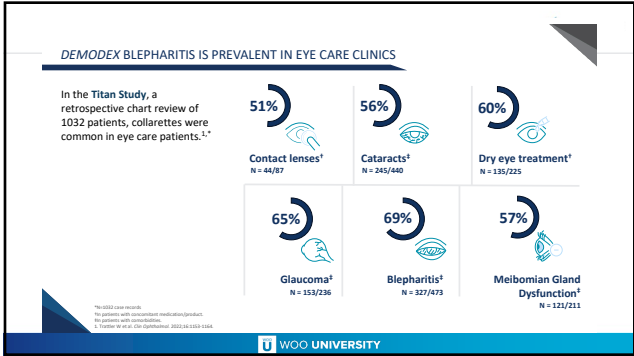
The Titan study (retrospective chart review) of 1032 patients in 6 U.S. OD/MD centers using slit lamp exam and collarettes for diagnosis.

Demodex blepharitis is observed across genders, age ranges, and races.

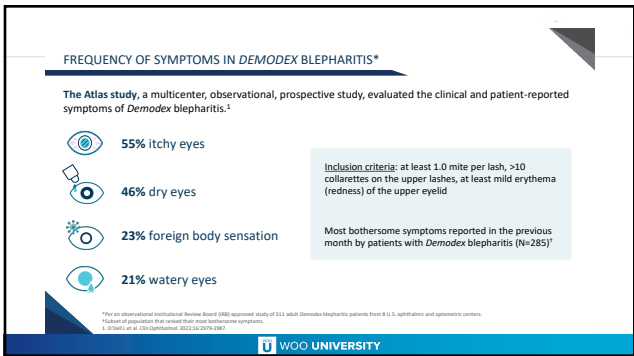
1. Friedman SE et al. Ocul Immunol Inflamm. 2018;26(12):1-7.

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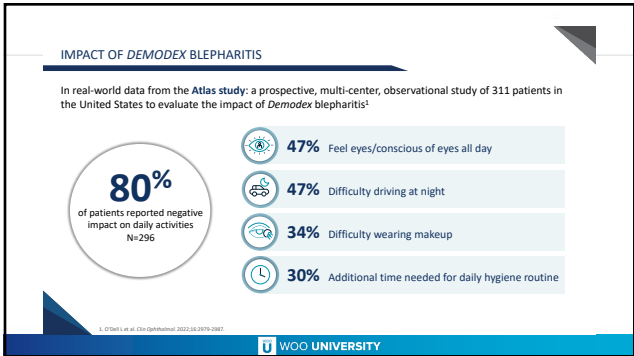
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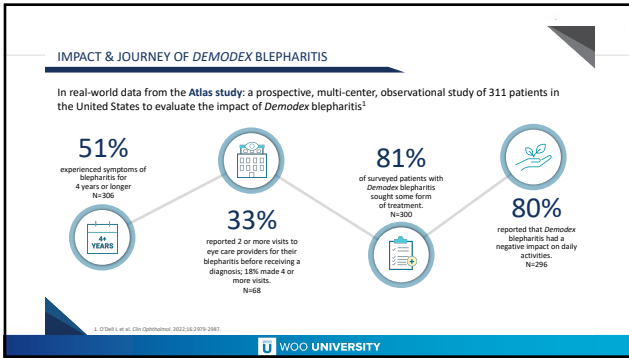
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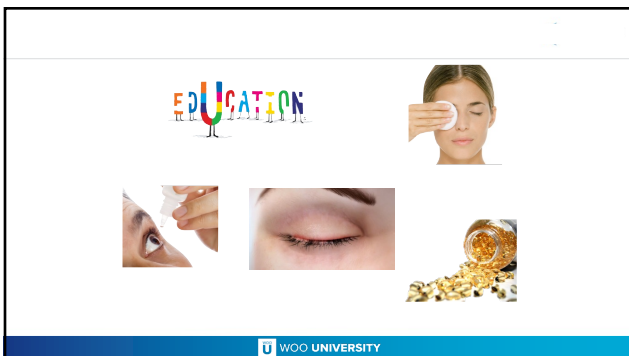
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What About Eyelid Massage?

- Cleaning with massage has shown to be more effective than just cleaning alone
 - ✓ Remembering to massage after every cleaning is important
- There are a number of techniques for lid massage, which helps express blocked meibomian glands
- In general, the massage should proceed from the root of the eyelid to the margin using a warm compress or a gentle pinching action on the eyelid, again from root to margin




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Active Ingredients

- **Hypochlorous Acid** which has shown to be an effective treatment for killing bacteria and controlling biofilms around the eye
 - ✓ Can also help with allergies
 - ✓ **Avenova** pioneered the use of Hypochlorous acid with its stable and pure solution for around the eye
- **Hydration Wipes** to help reduce dry skin associated with itchy, irritated, inflamed eyelids
 - ✓ Hyaluronic Acid and Glycerin wipes such as I-Med Pharma's I-Lid N Lash, are great for hydrating dry sensitive skin



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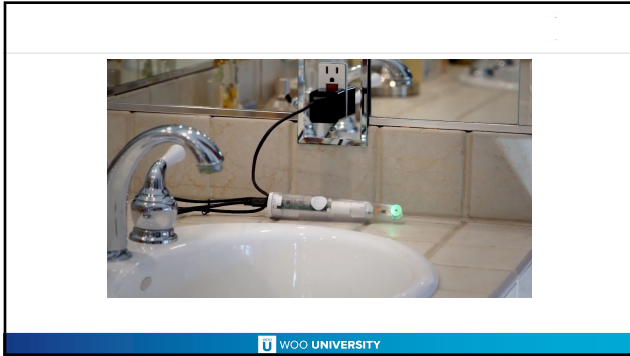
Terpene Terpinen-4-ol is toxic to demodex



- **Eyelid Wipes with Tea Tree oil** such as Cilradex, offer a natural, preservative-free way to cleanse the eyelashes, eyelids, and face to relieve symptoms of MGD, Rosacea, and dry eyes
- These products are formulated with 4-terpineol from tea tree oil, to eliminate demodex mites on eyelids


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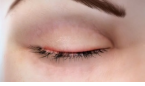

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Warm Compresses

- The procedure will differ in detail depending on the medium and product used, but the general principles are as follows:
 - A hot (not too hot) dampened compress or face cloth (the compress or applicator supplied with a specific eyelid cleansing system), should be held against the closed eye for around 5 minutes
 - This loosens scales on the eyelid margin and improves the fluidity of meibum
 - However, warm compresses are a poorly standardized treatment and nowadays new eyelid warming devices provide constant and controlled moist heat therapy

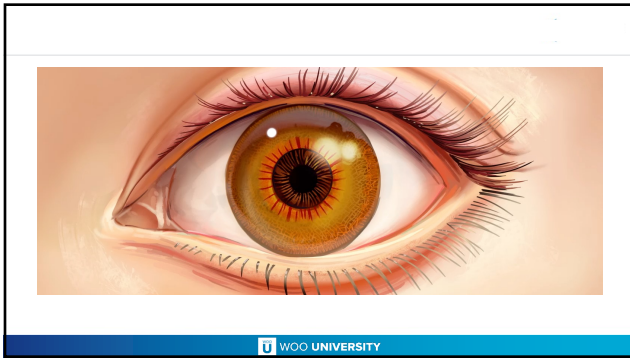
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No contraindications

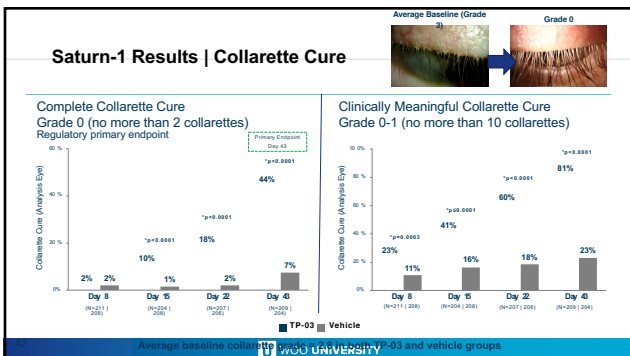
If more than one topical ophthalmic drug is being used, these drugs should be administered at least 15-20 minutes apart

Contact lenses should be removed prior to installation of XELVIV and should be reinserted 15-20 minutes following its administration



1 drop per eye **twice daily** (~12 hours apart) for 6 weeks

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Conclusions

Contact lens dropouts are not obvious in most practices; they just tend to fade away. But, they account for approximately 10% of contact lens wearers.

- The main cause for contact lens dropout is discomfort
- Discomfort with contact lenses is often related to eyelid issues
- ECPs play an important role in helping patients persist with routine eye care
- Importance of evaluating the ocular surface, including the eyelashes and eyelid margins to assess for MGD or Demodex infestation in contact lens wearers
- Better management of the ocular surface could reduce contact lens discomfort and potentially improve retention of contact lens wear.

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If you have any questions, you may send an email to elise@miamicontactlens.com

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Thank you! Please join us for our next COPE events

ABERROMETER/WAVEFRONT-GUIDED CONTACT LENSES: RESEARCH TO CLINICAL PRACTICE

Tuesday, March 19, 2024
6:30 PM - 6:30 PM PT

Speaker
Dr. Gwangyong Yoon

Date: March 19, 2024
Time: 5:30 PM - 6:30 PM PT

EVOLUTION OF EXCELLENCE IN THE TREATMENT OF PTERYGIUM FROM SCALPEL, TO AMNIOTIC MEMBRANES, TO EYE DROPS?

Wednesday, March 20, 2024
6:30 PM - 7:30 PM PT

Speaker
Dr. Sam Swartz

Date: March 20, 2024
Time: 6:30 PM - 7:30 PM PT

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