



## Your Eyes and Chronic Graft-versus-Host Disease

Celebrating a Second Chance at Life Survivorship Symposium

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# YOUR EYES AND CHRONIC GRAFT VS HOST DISEASE

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## OUTLINE

- How does graft vs host disease affect eyes?
- What are risk factors for developing this eye condition?
- **What are the treatments for it?**
- How can I make sure my eyes are taken care of?
- How do I find a qualified eye care provider?



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## EYE DISEASE IN CHRONIC GVHD

- Dry eyes
- The body's white blood cells attack the glands responsible for producing tears
- Abnormal tears can lead to damage of the surface of the eyes
- Tends to be more severe than “everyday” dry eyes



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## MORE SERIOUS FORMS OF GVHD IN EYES

- **Corneal abrasions** that don't heal well
- **Blood vessels** growing into the cornea (clear front window of the eye)
- **Thinning and perforation** (hole) in the cornea
- **Eyes need to be treated before disease gets to this point** (for best long-term outcomes)



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## HOW OFTEN DOES GVHD HAPPEN IN EYES?

- Percentage varies widely in published literature
  - 30-85% within 3 years of bone marrow transplant from donor cells



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## DRY EYE SYMPTOMS

- Feel dry
- Red eyes
- Tearing
- Burning
- Feels like sand in eyes



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## DRY EYE SYMPTOMS

- Itching
- Blurry vision
  - Changes during day and with blinking
- Worse later in day or when reading, at computer, watching TV



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## RISK FACTORS FOR GVHD IN EYES

- Prior acute GVHD
- Use of peripheral blood stem cells, rather than bone marrow or cord blood
- Bone marrow transplant from female donor to male recipient



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## DRY EYE IS A CHRONIC DISEASE

- Dry eye never goes away
- However, there are many treatments to manage symptoms
- Treatments have an additive effect
  - Need to combine treatments
- **New treatments are always coming out**



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## CONSERVATIVE TREATMENTS

- 20-20-20 Rule
- Limit screen time
- Drink more water?
- Stop or limit soft contact lens use



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## CONSERVATIVE TREATMENTS

- Increase humidity
  - Humidifier
  - Moisture chamber goggles
    - Night Time:
      - TranquilEyes or Eyeseals
    - Day Time:
      - 7Eye or Wily



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## ARTIFICIAL TEARS

- Avoid drops that “get the red out”
  - Exception: Lumify
- Bottled or preservative-free?
  - Bottled: more convenient, don't use more than 4 times a day



Preservative-free: In vials, no limit on use



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## THICKER OPTIONS

- Thicker drops (gel drops)
  - Stay on eye longer, but causes more blur
  - Refresh Celluvisc is a gel drop that is preservative-free



Nighttime:

- Gel drops, gel (thicker), ointment (thickest)



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## OMEGA-3 FATTY ACIDS

- Necessary for the lacrimal gland to create tears
- Oral supplements can help for dry eyes
- Most common forms:
  - Fish oil
  - Krill Oil
  - Flax seed Oil



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## DREAM STUDY

- Dry Eye Assessment Management Study
- 27 Centers, 499 patients
- 3000 mg of fish oil vs 1 tsp Olive oil
- Both treatments improved dry eye symptoms by the same amount
- **Bottom Line: Have olive oil in your diet!**



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## PRESCRIPTION STEROID EYE DROPS

- Help decrease inflammation on the surface of eye
- Need to be monitored by an eye doctor
- Potential side effects:
  - Worsening cataracts
  - Increased eye pressure/glaucoma



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## PRESCRIPTION DROPS SPECIFIC FOR DRY EYE

- Restasis (cyclosporine 0.05%)
- Xiidra (lifitegrast 5%)
- Cequa (cyclosporine 0.09%)



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## PUNCTAL PLUGS

- Tiny devices placed in tear drainage system (inner corners of eyelids)
- Helps your eye keep own tears longer
- Helps eye drops stay on eye longer
- Placed in office, no pain or needles

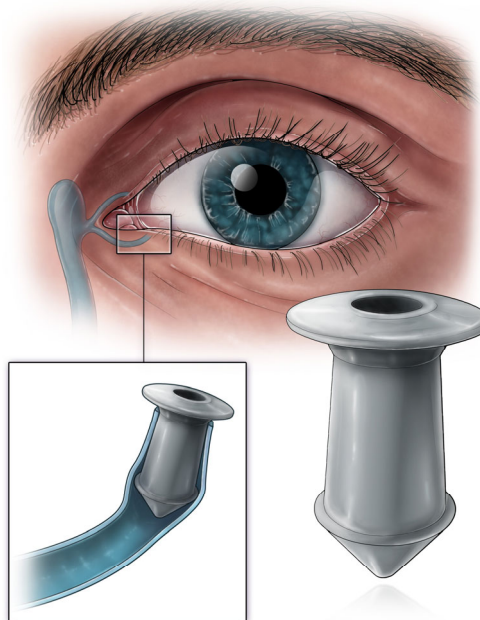


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## PUNCTAL PLUG



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## SERUM TEARS

- Made from your own blood
- Contains growth factors, vitamins to assist in healing dry eye
- Use 4 times a day
- Keep bottle you are using in refrigerator/cooler
- Keep supply frozen up to 6 months
- Small risk of eye infection



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## SCLERAL LENS

- Large diameter, rigid, gas-permeable contact lens
- Sterile saline constantly bathes surface of eye
- Lower infection risk than soft contact lens
- Need to insert and remove daily
- Improvement in pain, sensitivity to light, irritation
- **Need specialized contact lens fitter**



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## BANDAGE CONTACT LENS

- Only for patients with corneal abrasion that aren't healing
- Soft contact lens to help healing
  - Worn 24/7
- Temporary use
- Need to be monitored by eye doctor for infection



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## CUSTOMIZED DRY EYE REGIMEN

- Every patient will have a different combination of these treatments.
- Depends on:
  - Severity of dry eyes
  - Insurance coverage/ability to afford
  - Not every treatment works on everyone



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## WHAT CAN I DO NOW TO HELP MY EYES?

- Use a humidifier
- Wear wrap-around sunglasses outside
  - Helps cut down on light
  - Protects your eyes from wind/dust
- Limit screen time
- Have olive oil in diet



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## HOW DO I TAKE CARE OF MY EYES?

- Get an eye exam with an eye doctor who specializes in dry eyes
  - Ophthalmologist (cornea specialist)
  - **BMT InfoNet online directory of specialists**
- Follow their treatment recommendations
- Be patient:
  - There is no magic bullet/overnight fix!



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## OTHER RESOURCES

- [www.dryeyezone.com](http://www.dryeyezone.com)
  - Dry eye information
  - discussion forums
  - Facebook page
- **Graft vs Host Disease: What to Know, What to Do**
  - Free from BMT InfoNet at [www.bmtinfonet.org/GVHDbook](http://www.bmtinfonet.org/GVHDbook)
  - Or phone 847-433-3313 to order



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# Questions?



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