Different Types of Dry Eye and the Treatments Used

Treatments for dry eye disease work best when based on the type and cause of dry eye

Evaporative Dry Eye - In this type of dry eye, the surface layer of the tears (the oil layer) is of poor quality and allows the tears to evaporate too quickly. Treatments are aimed at opening up the oil glands, improving oil production and quality of the oils produced. Options include:

- **Zocular Eyelid System Treatment (ZEST)** - ZEST is an in office procedure using natural ingredients found in okra. This procedure cleans the eyelid margin and removes biofilm to reduce inflammation.

- **Thermal Pulsation** - There are many devices available that will heat up the oil in the eyelids to a point where your doctor can squeeze the old oil out of the oil glands. This allows for new oils to be produced by the eye, and provides long term relief.

- **Nutritional supplements** - Omega 3s may help improve the quantity and quality of the oils produced inside the eyelids by the Meibomian glands.

- **Hot compresses w/ lid massage** - using a bead therapy mask for 5 minutes per day and gently massaging the eyelids can help unclog the opening of the glands.

- **HypoChloric acid and/or Tea Tree Oil treatments** can reduce inflammation, bacterial overpopulation and leave the lids feeling clean and refreshed. These can come in the form of sprays, foams and pre-moistened wipes.

- **Oral anti-inflammatories** like doxycycline can improve oil quality and quantity

Aqueous Deficient Dry Eye - In this type of dry eye there is not enough fluid on the surface of the eye and treatments focus on conserving tears or adding tears

- **Punctal occlusion** can be used to block the drains in the eyelid with tiny silicone or gel-like plugs that prevent the tears from draining away too quickly

- **Artificial Tears in drop or spray form** - preservative-free artificial tear solutions are preferred because they rarely irritate the eyes.

Neurogenic Dry Eye - This new category of dry eye is caused when the nerves of the cornea are damaged. Damage can be from trauma, surgery, or other causes. This can lead to improper healing of the eye, reduced blinking and/or tear production. Treatment is geared

towards improving nerve function by either regrowing the nerves or healing the eye enough for it to begin regrowing the nerves itself

- **Amniotic Membranes** - One of the newest methods of treating dry eyes, this is a contact lens like device made of stem cells which provides a protective environment for the eye, allowing it to heal

- **Oxervate** - Is a recombinant form of human NGF, and is the only FDA-approved therapy specifically indicated for the treatment of NK

- **Tyrvaya** - Is a new class of medication, it is a nasal spray that activates nerves in the nasal cavity to promote natural tear production.

Inflammatory Dry Eye

Inflammatory Dry Eye – This type of dry eye is related to the level of inflammation on the surface of the eye which can be secondary to the previously mentioned dry eyes or from autoimmune diseases. Anti-inflammatory medications can help greatly relieve symptoms

- Corticosteroid eye drops - Eye drops that can be used two or more times a day. They are great at reducing inflammation quickly but shouldn't be used long term to prevent side effects

- Restasis/Cequa - These eye drops reduce inflammation in the tears and increase tear production to relieve dryness and irritation. It should be used twice a day for several weeks consistently to see benefits.

- Xiidra - This eyedrop reduces inflammation in the tears and increases tear production through a different mechanism from Restasis and Cequa. It should be used twice a day for several weeks to see benefits.

Supportive Therapy

- **Treating concurrent allergies** with prescription or OTC allergy drops

  ☐ Pataday (OTC)   ☐ Lastacaft (OTC)   ☐ Bepreve

- **Blinking** - Taking breaks to blink regularly when reading or staring at a computer screen for long periods of time

- **Sunglasses outdoors**, particularly those with wrap around frames, to reduce exposure to drying winds and the sun.

- **Drink plenty of water** (8 to 10 glasses) each day