

How Dry Disease Impacts Vision and Refraction (1hr)

This course is designed to discover the disease and complexities of dry eyes and its impact upon the refractive status of the eye. This course will discover the anatomy and physiology of the eye and tear film. It will also cover symptoms, diagnosing, testing, and current available treatments for the dry eye disease.

Objectives:

1. Identify the Anatomy of the tear
2. The impact of tears on refraction
3. Refraction and surgical outcomes
4. Causes of dry eyes
5. Current technology and methods used in mitigating dry eyes

Outline:

1. Anatomy of the eye (10 min)

- Cornea
- Lids
- Lacrimal System

Impact of tears on refraction

- Lipid layer
- Aqueous layer
- Mucus layer

2. The impact of tears on refraction (10 min)

- Changes in the tear film
 - Thinning of the tear film
 - Mucus
- Drying of the cornea
- Changes in refraction
- Halos around the lights

3. Causes of dry eyes (20 min)

- Anatomy or physiology
 - Tear production
 - Structures
 - Drainage
- Chronic Disease

- Diabetes
- Sjogren's disease
- Rheumatoid Arthritis
- Thyroid Disease
- Medications
 - Glaucoma medications
 - Allergy medications
 - High blood pressure medications
 - Other medications
- Environment
 - Animal dandruff
 - Ceiling fans
 - Dust
 - Fans
 - Heating and cooling systems
 - Wind
- Age/Sex
 - Females
 - Over 50
 - Post-menopausal

4. Dry eye treatment (20 min)

- Adequate hydration
 - Drinking water
- Artificial tears
 - Aqueous tears
 - Lipid layer tears
 - Glycerin based tears
 - Nano tears
- Medications
 - Antihistamines
 - Glaucoma medications (Alpha antagonist)
 - Hypertension medications
- Heat treatments
 - Microwavable masks
 - Heating elements
 - FDA Approved Thermal Pulsation
- Supplements
 - Vitamin A
 - Vitamin D

- Fish oils
- Omega 3, 6, 9