

DRY EYE DISEASE: MECHANISMS AND CHALLENGES IN CARE

Dry eye is a complex disease area which leads to challenges in care

Common symptoms of dry eye include^{1,2}

- Dryness
- Grittiness
- Burning
- Foreign-body sensation
- Ocular soreness or discomfort
- Watery eyes
- Vision fluctuations

! Many factors can contribute to dry eye and exacerbate symptoms:³

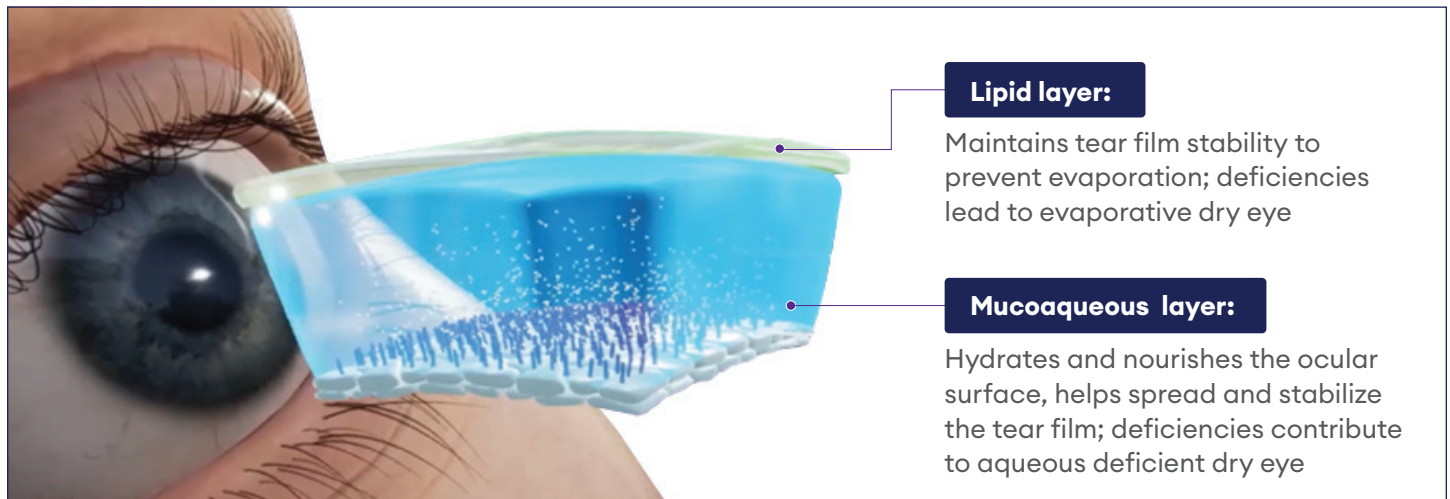
Consistent non-modifiable risk factors:

- Age
- Female gender
- Asian ethnicity
- Meibomian gland dysfunction
- Certain diseases (eg, connective tissue diseases)

Modifiable risk factors:

- Use of visual displays
- Contact lens use
- Hormone replacement therapies
- Environment (polluted or arid)
- Certain medications (eg, antihistamines)

The tear film is a bilayer which works to protect the ocular surface. The complex nature of tear film contributes to the multifactorial etiology of dry eye, as lack of adequate function in either area can cause disease. While dysfunction in either the lipid or mucoaqueous layer can cause evaporative or aqueous deficient dry eye, respectively, many patients also exhibit mixed dry eye, reflective of dysfunction in both layers.



- The principles of managing dry eye are to reduce symptoms and reestablish a normal ocular surface. Tear replacement, through artificial tear use, is the mainstay of treatment for dry eye, regardless of etiology.^{1,4,5}
- Strategies to alleviate symptoms of dry eye beyond tear replacement include tear conservation (eg, punctal plugs) and tear stimulation (eg, secretagogues), lid hygiene and warm compresses with or without expression.⁴
- More advanced therapies include antibiotics, corticosteroids, and immune modulators, which attempt to break the cycle of inflammation and further ocular destruction as a result of tear film insufficiency.^{1,4} However, there are several key challenges in care of dry eye disease, including a lack of standardized diagnosis and management.^{1,3}

! The failure to correct deficiencies and provide adequate treatment for dry eye disease may result in chronic eye pain and progression to burdensome ocular surface disease.^{1,6,7}