

The correlation between dry eye disease and alcohol consumption.

San Arrie*

Department of Ophthalmology, University of Lisboa, Lisbon, Portugal

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Description

The ocular surface disorder, Dry Eye Disease (DED) is characterized by tear film instability, hyper-osmolarity, inflammation, and neurosensory abnormalities. DED is a common disease, with prevalence estimates ranging from 5% to 50%, depending on the population studied and the description of the dry eye used. Dry eyes have a significant negative impact on one's quality of life and associated expenditures. The projected societal damage from DED in the United States alone is estimated at approximately 55 billion dollars. Despite the various therapy options available, complete symptom remission is rare, and the condition is frequently chronic. As a result, identifying modifiable risk factors is critical for preventing DED or eradicating the disease in the beginning.

According to major etiological research studies the prevalence of DES ranges from 7.8% to 33.7 percent. Patients face considerable socioeconomic problems in addition to physical discomfort, such as higher healthcare expenditures and vision-related quality-of-life issues. Various population-based studies have been conducted over the last few decades to investigate the potential risk factors for DES, with many of them indicating that alcohol use may play a role.

A complete eye examination can be used to detect dry eyes. The following tests may be used to assess the quantity and quality of tears produced by the eyes:

- Patient history will be used to assess the patient's symptoms as well as any general health issues, medicines, or environmental variables that may be contributing to the dry eye condition.
- Examination of the eye externally, including lid anatomy and blink dynamics.
- Bright light and magnification are used to examine the eyelids and cornea.
- The quantity and quality of tears are measured to see if there are any anomalies. To better examine tear flow and emphasize any changes to the outer surface of the eye caused by inadequate tears, special dyes may be injected into the eyes.

Even in the absence of Sjogren syndrome, rheumatoid arthritis, or other autoimmune disorders; dry eye syndrome is a frequent symptom among middle-aged and older individuals. Dry eye syndrome can be a source of significant discomfort and irritation.

Aging is a common reason for reduced tear production. Rheumatoid arthritis, Sjogren's syndrome, allergic eye disease, Scleroderma, graft vs. host disease, thyroid problems, vitamin A insufficiency are some of the medical complications which result in DED.

Further study is needed since alcohol intake has been identified as a possible modifiable risk factor for DED. Previous research on the relationship between dry eye and alcohol use has yielded mixed results. Alcohol is secreted into tears in one experiment, boosting tear film osmolarity and reducing tear film breakup time with high consumption. A recent meta-analysis of eight observational studies found a significant positive relationship between dry eye and alcohol use.

Assess the effect of sex on this relationship and stratified by sex to investigate males and females separately. A study classified the individuals into three age groups to investigate the influence of age on the relationship between symptomatic dry eye and alcohol use as 20-39, 40-59, and 60+ years. As DED has both sex and age-specific mechanisms and risk factors and alcohol use has been shown to affect males and females differently and hypothesized these stratifications are necessary to shed light on this association.

Conclusion

Alcohol usage was found to have a clear sex-specific influence on DED in a large population-based investigation, indicating as a risk factor primarily in females. This adds to the evidence of sex-specific dry eye pathophysiological processes and emphasises the relevance of sex stratification in DED research. The modest protective benefit of increasing alcohol use in men should be taken with care, since alcohol's other health consequences may be more clinically significant.

*Correspondence to

Dr. San Arrie

Department of Ophthalmology

University of Lisboa

Lisbon

Portugal

E-mail: sanarrie\$@umlub.pt