

# Higher ozone, lower humidity levels associated with dry eye disease

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In a study published online by *JAMA Ophthalmology*, Dong Hyun Kim, M.D., of Gachon University Gil Medical Center, Incheon, Korea and colleagues examined the associations between outdoor air pollution and dry eye disease in a Korean population.

Air pollution is an important public health concern. According to the World Health Organization, most significant constituents of air pollution include particulate matter (PM), ozone, nitrogen dioxide, and sulfur dioxide. Ambient levels of air pollution are known to be associated with a wide range of [adverse health effects](#) that particularly affect the respiratory and cardiovascular systems. Ocular surface abnormalities related to air pollution are thought to be a subtype of [dry eye disease](#) (DED); however, to date, there has been no large-scale study evaluating an association between air pollution and DED that includes multiple air pollutants.

This study included data on 16,824 participants in the fifth Korea National Health and Nutrition Examination Survey, conducted from January 2010 to December 2012. Dry [eye disease](#) was defined as previously diagnosed by an ophthalmologist or the presence of frequent ocular pain and discomfort, such as feeling dry or irritated. Outdoor air pollution measurements (average annual humidity, particulate matter with aerodynamic diameter

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