The use of medications that increase sensitivity to the sun, combined with exposure to sunlight, appears to be associated with the risk of age-related cataract, according to a report posted online today that will appear in the August print issue of *Archives of Ophthalmology*.

Besides age, several risk factors have been identified for common types of cataract, including smoking, diabetes and hypertension, according to background information in the article. Sunlight and exposure to ultraviolet-B (UV-B) rays have been shown to be associated with cortical cataract, clouding or opacity occurring first on the outer edges of the lenses. Some medications taken by mouth or by injection have been shown to increase sensitivity to the sun, causing signs and symptoms such as itching or rash on areas of the skin exposed to sunlight.

To determine if these medications also affect the association of sun exposure to cortical cataract, Barbara E. K. Klein, M.D., M.P.H., and colleagues at the University of Wisconsin, Madison, studied 4,926 individuals living in Beaver Dam, Wisconsin and first examined between 1988 and 1990. Participants were interviewed about their residential history, which was used to construct a measure of their average annual exposure to ambient UV-B rays. Interviewers also asked participants to bring their medications, and any sun-sensitizing drug—including diuretics, antidepressants, antibiotics and the pain reliever naproxen sodium.

An increasing percentage of study participants reported having taken
these types of medications over a 15-year follow-up period (24.1 percent at the beginning of the study, compared with 44.8 percent at the 15-year follow-up). The overall incidence of cataract was not associated with their use or with exposure to sunlight. However, after adjusting for age and sex, an interaction between sun-sensitizing medication use and UV-B exposure was associated with the development of cortical cataract.

"The medications (active ingredients) represent a broad range of chemical compounds, and the specific mechanism for the interaction is unclear," the authors write. The lens of the eye develops from the same layer of tissue as the skin, and medication that increases the skin's response to the sun may modify the effect of sunlight exposure on the eye as well.

"Our results need to be evaluated in other populations, especially in view of the increasing frequency of sun-sensitizing medications," the authors conclude. "If our findings are confirmed, it would be important to examine whether the effect is greater in those with higher levels of ambient sunlight (UV-B) exposure and if dose or duration of medication use is also important. Because cortical cataract is a common lens opacity in adults, present in about 16 percent of the Beaver Dam Eye Study population at the baseline examination, our study findings may be relevant to public health."


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