Study finds low levels of ultraviolet A light protection in automobile side windows

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An analysis of the ultraviolet A (UV-A) light protection in the front windshields and side windows of automobiles finds that protection was consistently high in the front windshields while lower and highly variable in side windows, findings that may in part explain the reported increased rates of cataract in left eyes and left-sided facial skin cancer, according to a study published online by JAMA Ophthalmology.

Ultraviolet A is linked to increased risks of cataract formation and skin cancer. In the United States, the level of auto glass UV-A protection for drivers of different makes and models of vehicles is unknown. Brian Boxer Wachler, M.D., of the Boxer Wachler Vision Institute, Beverly Hills, Calif., measured the outside ambient UV-A radiation, along with UV-A radiation behind the front windshield and behind the driver's side window in 29 automobiles from 15 automobile manufacturers. The years of the automobiles ranged from 1990 to 2014, with an average year of 2010.

Dr. Boxer Wachler found that the average percentage of front-windshield UV-A blockage was 96 percent, higher than the average percentage of side-window blockage, which was 71 percent. A high level of side-window UV-A blockage (>90 percent) was found in 4 of 29 automobiles (14 percent).

"Automakers may wish to consider increasing the degree of UV-A protection in the side windows of automobiles," Dr. Boxer Wachler writes.

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