

Allergies lower risk of low- and high-grade glioma

February 7 2011

The more allergies one has, the lower the risk of developing low- and high-grade glioma, according to data published in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

Researchers from the University of Illinois at Chicago, used self-reported data on medically diagnosed allergies and antihistamine use for 419 patients with glioma and 612 cancer-free patients from Duke University and NorthShore University HealthSystem. Controls had no history of brain tumors or any cancers, and did not have a history of neurodegenerative disease.

"Other studies have found a correlation between allergies and glioma risk," said Bridget McCarthy, Ph.D., a research associate professor of epidemiology at the University of Illinois at Chicago School of Public Health. "In this study we confirmed that allergies are protective and found that the more allergies one has, the more protected he or she is."

Participants completed a web-based or telephone survey and were asked if they were medically diagnosed with allergies or asthma at least two years prior to the survey, and if so, the age of diagnosis. In addition, they were asked to indicate the number of individual allergies within each of the following groupings: seasonal, pet, medication, food and other.

Included in the survey were details on regular medication usage two years or more prior to the survey, and information on specific

medication brands, frequency and duration of usage.

Allergies appeared to be protective and provided a reduced risk for those with who have a higher number and more types of allergies, according to the study results. Age of [allergy](#) diagnosis and years since diagnosis were not associated with glioma risk. In addition, antihistamine use, including diphenhydramine hydrochloride (a possible neurocarcinogen), did not appear to affect glioma risk separately from the effects of allergies.

"Our study confirms that there is a relationship between the immune system of allergy sufferers and glioma risk," said McCarthy. "A comprehensive study of allergies and antihistamine use with standardized questions and biological markers is essential to further delineate the biological mechanism that may be involved in brain tumor development."

Provided by American Association for Cancer Research

Citation: Allergies lower risk of low- and high-grade glioma (2011, February 7) retrieved 3 July 2023 from <https://medicalxpress.com/news/2011-02-allergies-low-high-grade-glioma.html>

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