What Factors Increase the Risk of Contracting the Common Cold?: An Epidemiologic Study Identifying Risk and Protective Factors for the Common Cold

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In this study, the question, “What lifestyle, demographic, and genetic factors increase the risk of contracting the common cold?” was researched. Studies suggest that susceptibility to the cold is a good proxy of overall immune health. Thus, it was hypothesized that there are certain lifestyle, demographic, and genetic factors that increase susceptibility to the common cold, and quantitative standards were created to determine if the data met the criteria for each considered risk factor. 241 participants completed a questionnaire that assessed lifestyle and demographic information and served as a means of data collection for the experiment. Four statistical tests were performed on the data: a chi-square test for independence, Cramer’s V strength test, a two-sample z-test for the difference between proportions, and a t-test for the slope in least-squares regression in which each variable was transformed using exponential, power, or logistic models. Based on the results of this experiment—that age, hours of exercise per day, and servings of fermented foods have the strongest associations with the common cold, followed by minutes to fall asleep each night, sleep efficiency, servings of refined carbohydrates, family history, and exposure to e-cigarettes or smoke, and lastly, servings of processed meats, history of e-cigarette usage, asthmatic status, and medication usage—the hypothesis was partially supported. To allow for further research, a longitudinal study using a tracking app to collect data could be implemented or the effect of risk factors on the severity of colds could be examined. The findings of this study contribute to scientific knowledge about the common cold, and identifying risk factors to the common cold can help create effective methods of prevention.

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