

Prevalence of immunosuppression among US adults

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In a study published online by *JAMA*, Rafael Harpaz, M.D., M.P.H., of the U.S. Centers for Disease Control and Prevention, Atlanta, and colleagues analyzed data from the 2013 National Health Interview Survey (NHIS; an annual health survey conducted via household interviews) to estimate the prevalence of self-reported immunosuppressed adults in the United States. The study is being released to coincide with its presentation at IDWeek 2016.

The number of immunosuppressed adults in the United States is unknown but thought to be increasing because of both greater life expectancy among immunosuppressed adults due to improvements in medical management, as well as new indications for immunosuppressive treatments. Immunosuppression increases the risks and severity of primary or reactivation infections; its prevalence has implications for food and water safety, tuberculosis control, vaccine programs, infection control strategies, outbreak preparedness, travel medicine, and other facets of public health.

In 2013, NHIS respondents were asked whether they had ever been told by a "doctor or other health professional" that their immune system was weakened. Those responding yes were asked follow-up questions to assess whether that status was current (i.e., at time of response) and to report additional evidence of [immunosuppression](#). Those reporting use of immunosuppressive medications or treatments or occurrence of immunosuppressive medical conditions (i.e., hematopoietic cancers or human immunodeficiency virus [HIV] infection) were considered

immunosuppressed in this analysis, but those reporting only frequent colds or infections or attributing immunosuppression solely to chronic diseases or to solid cancers (i.e., in absence of immunosuppressive treatments) were not.

The total 2013 NHIS household response rate was 76 percent, consisting of 41,355 eligible households. Of 34,426 eligible adult respondents within these households, 4.2 percent (n = 1,442) had been told at some time by a health professional that their immune system was weakened. Of these, 2.8 percent (n = 951) reported current immunosuppression and additional evidence of immunosuppression, translating to an estimated U.S. prevalence of 2.7 percent. Prevalence was highest among women, whites, and persons age 50 to 59 years.

"This study was not designed to explore the attributable causes of immunosuppression, although prevalence is likely driven by frequency and chronicity (e.g., life-long immunosuppression due to HIV infection, treatment for autoimmune conditions, or solid organ transplantation vs short-term cancer chemotherapy). The higher prevalence of immunosuppression among women may reflect their higher risk for autoimmune conditions. Age-specific immunosuppression increased with age, in parallel with the epidemiology of prevalent conditions that require immunosuppressive treatments, but it is unclear why it peaked at ages 50 to 59 years," the authors write.

"This study addresses an underappreciated phenomenon and serves as a call for additional data from other sources to complement and fill the gaps in the study. Tracking immunosuppression over time is particularly important given the hundreds of clinical trials now under way to assess the use of immunosuppressive treatments for prevention or mitigation of common chronic diseases in highly prevalent risk groups."

More information: *JAMA*, [jamanetwork.com/journals/jama/ ...](http://jamanetwork.com/journals/jama/)

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