

People with less education could be more susceptible to the flu

November 10 2009

People who did not earn a high school diploma could be more likely to get H1N1 and the vaccine might be less effective in them compared to those who earned a diploma, new research shows.

The University of Michigan study looked at a latent virus called CMV in young people, and the body's ability to control the virus. Previous studies have shown that elderly people with less education are less successful at fighting off CMV, but this is the first known study to make that connection in younger adults as well, said study co-author Jennifer Dowd, who began the work while in the Health and Society Scholars program at the U-M School of Public Health.

Previous studies have shown that high levels of CMV antibodies make it tougher for the elderly to fight new infections like H1N1, and hampers the body's immune response to the flu vaccine. The U-M findings suggest that lower socioeconomic status may make it tougher even for adults of all ages to fight new infections and may make the <u>flu vaccine</u> less effective.

"We're showing that the ability to keep CMV under control varies by income and education even at much younger ages, and this could have implications for the ability to fight new infections like H1N1 for all ages, not just the elderly," said Dowd, now an assistant professor of epidemiology and biostatistics at Hunter College. Allison Aiello, assistant professor of epidemiology at University of Michigan SPH, is coauthor.



"We looked at CMV because it is an infection that is not cleared from the body but rather persists in a latent state with periodic reactivations in generally healthy individuals," Aiello said. "Immune response to CMV may serve as a marker of general immune alterations and is therefore an important indicator of health risks."

CMV is a latent virus in the <u>herpes</u> family. Infection is common but the majority of people aren't symptomatic because the immune system keeps the virus under control. People of lower income and education lose immune control more easily, Dowd said. Their weakened immune systems, which may be due to increased levels of stress, make them more susceptible to other infections as well. "What is going on with the dramatic (downturn) in the economy could actually translate into people's susceptibility to these diseases," Dowd said.

CMV is thought to be a prime culprit in breaking down the immune system as we age, and CMV is also associated with chronic conditions like heart disease. In the study, a person with less than a high school education had the same level of immune control as someone 15-20 years older with more than a high school education, Dowd said.

"When you listen to the current news about H1N1, it's interesting because everyone feels that this is a random threat, that we all have an equal chance of getting it," Dowd said. "This study points out that certain groups are potentially more susceptible and it's not just people with existing chronic illness."

<u>More information:</u> The study, "Socioeconomic Differentials in <u>Immune</u> <u>Response</u>," will appear in an upcoming issue of the journal <u>Epidemiology</u>. journals.lww.com/epidem/Abstra <u>une_Response.22.aspx</u>

Source: University of Michigan (<u>news</u> : <u>web</u>)



Citation: People with less education could be more susceptible to the flu (2009, November 10) retrieved 25 April 2024 from https://medicalxpress.com/news/2009-11-people-susceptible-flu.html

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