Cross-protective T cells could explain asymptomatic influenza

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Influenza virus. Illustration courtesy U.S. National Institute of Allergy and Infectious Diseases

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(HealthDay)—Naturally occurring cross-protective T-cell immunity may protect against disease in polymerase chain reaction (PCR)-confirmed influenza, according to a study published online April 6 in the *American Journal of Respiratory and Critical Care Medicine*.

Andrew C. Hayward, M.D., from the Farr Institute of Health Informatics Research in London, and colleagues examined whether naturally occurring T-cell responses targeting highly conserved internal influenza

proteins could provide cross-protective immunity against pandemic and seasonal influenza. Influenza A (H3N2) virus-specific T cells were quantified in a population cohort between 2006 and 2010. Baseline T-cell measurements were identified for 1,414 unvaccinated individuals (1,703 participant observation sets).

The researchers found that T-cell responses to A(H3N2) virus nucleoprotein (NP) dominated. In participants lacking antibody to A(H1N1)pdm09, T-cell responses to A(H2N3) virus NP strongly cross-reacted with A(H1N1)pdm09 NP (P influenza-specific T-cell responses were detected.

"Naturally occurring cross-protective T cell immunity protects against symptomatic PCR-confirmed disease in those with evidence of infection and helps to explain why many infections do not cause symptoms," the authors write.

More information: Full Text (subscription or payment may be required)

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