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Andrews SF, Huang Y, Kaur K, Popova LI, Ho IY, Pauli NT, et al. Sci Transl Med. 2015 Dec 2;7(316):316ra192.

A universal flu vaccine has been a Sisyphean trial?despite successful seasonal vaccines, the immune system has to start over with newly mutated influenza strains. Now, Andrews et al. look in depth at the B cell response to the pandemic 2009 H1N1 vaccine over time. They found that people with low titers of preexisting antibodies were more likely to generate a broadly reactive response that targets the more conserved hemagglutinin (HA) stalk region, whereas those with higher levels of preexisting antibodies responded by targeting the more variable HA head. The preexisting head antibodies were immunodominant and prevented clear access to the stalk. These data suggest that exposure

history is critical in designing a universal flu vaccine.

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