

# Durable end to AIDS will require HIV vaccine development

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Broader global access to lifesaving antiretroviral therapies and wider implementation of proven HIV prevention strategies could potentially control and perhaps end the HIV/AIDS pandemic. However, a safe and at least moderately effective HIV vaccine is needed to reach this goal more expeditiously and in a more sustainable way, according to a new commentary from Anthony S. Fauci, M.D., director of the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health, and colleague Hilary D. Marston, M.D., M.P.H.

In the piece, the authors note that behavioral, cultural and legal factors have hindered HIV prevention and treatment efforts and explain why those factors necessitate the development of an HIV vaccine. Although attempts to develop a vaccine have so far proven disappointing, recent advances offer encouraging areas for HIV vaccine researchers to pursue, according to the authors. Notably, the discovery of naturally occurring broadly neutralizing antibodies against HIV and studies of their stimulation in infected individuals have opened new avenues in [vaccine development](#). Using improved understanding of those antibodies and the specific sites on HIV to which they bind, the natural process of antibody evolution could be replicated and greatly expedited allowing protection against initial infection. Significant advances also have been made in understanding T-cell responses that may be important to vaccine-induced immunity against HIV.

The authors conclude that "the HIV prevention community should hold

fast to its commitment to vaccine science. Ultimately, we believe, the only guarantee of a sustained end of the AIDS pandemic lies in a combination of nonvaccine prevention methods and the development and deployment of a safe and sufficiently effective HIV vaccine."

**More information:** AS Fauci and HD Marston. Ending AIDS—Is an HIV vaccine necessary? *New England Journal of Medicine* DOI: [10.1056/NEJMp1313771](https://doi.org/10.1056/NEJMp1313771) (2014).

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