

to hepatitis B virus vaccination among HIV-1 infected and uninfected adults in Kenya.

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Abstract:

In studies from high-income countries, human immunodeficiency virus type 1 (HIV-1)-infected persons have diminished responses to hepatitis B virus (HBV) vaccination, compared with HIV-1-uninfected persons, but data from other settings are limited. **METHODS:** We compared the immune response to HBV vaccination among HIV-1-infected and HIV-1-uninfected Kenyan adults and assessed the response of HIV-1-infected initial nonresponders to revaccination with a standard HBV vaccine series. **RESULTS:** Of 603 participants, 310 (51.4%) were HIV-1-infected, for whom the median CD4(+) T-cell count was 557 cells/ L (interquartile range, 428-725 cells/ L); none were receiving antiretroviral therapy. Nonresponse to HBV vaccine was higher among HIV-1-infected participants, compared with HIV-1-uninfected participants (35.8% vs 14.3%; odds ratio, 3.33; $P < .001$). Of 102 HIV-1-infected initial nonresponders, 88 (86.3%) responded to revaccination, for an overall response, including to revaccination, of 94.9%. Among HIV-1-infected individuals, lower CD4(+) T-cell counts and male sex were independent predictors of nonresponse to initial vaccination, and lower body mass index, higher plasma HIV-1 RNA levels, and longer time to revaccination predicted nonresponse to revaccination. **CONCLUSIONS:** Kenyan adults had similar HBV vaccination responses as persons from high-income countries. Timely revaccination of HIV-1-infected nonresponders increased response to the vaccine to 95%.