

# Hepatitis A vaccination in children under two remains effective for ten years

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Vaccination against the hepatitis A virus (HAV) in children two years of age and younger remains effective for at least ten years, according to new research available in the August issue of *Hepatology*, a journal of the American Association for the Study of Liver Diseases (AASLD). The study found that any transfer of the mother's HAV antibodies does not lower the child's immune response to the vaccine.

The [World Health Organization](#) (WHO) estimates that 1.4 million cases of HAV occur worldwide each year. HAV affects the liver and typically occurs in areas with [poor sanitation](#) where ingestion of [contaminated food](#) or water can transmit the virus. In the U.S., HAV cases have decreased by 90% in the past 20 years, with roughly 20,000 new cases reported each year according to the [Centers for Disease Control and Prevention](#) (CDC). Experts attribute the decline in HAV cases in the U.S. to routine vaccination of children 12 to 18 months.

According to lead author Dr. Umid Sharapov, an [epidemiologist](#) with the CDC and his coauthors, this is the first study to examine the effectiveness of a two-dose inactivated hepatitis A vaccine in children younger than two years of age over a ten-year period. In addition, the researchers investigated whether maternal anti-HAV antibody transfer to their children impacts the vaccine protection against HAV.

With [parental consent](#), researchers enrolled full-term infants who were healthy at six-months of age. Mothers were tested for total antibody to HAV. The 197 infants and toddlers were broken into three age groups:

group one-infants 6 to 12 months; group two-toddlers between 12 and 18 months; and group three-toddlers 15 to 21 months of age. Each group was randomized by maternal anti-HAV status. HAV [antibody levels](#) were measured at one and six months, and additional follow-up took place at three, five, seven and ten years after the second dose of hepatitis A vaccine.

At one month following the second dose of the hepatitis A vaccine children in all groups showed signs of protection from the virus. At the ten-year follow-up most children retained anti-HAV protection. In the first group, 7% and 11% of children born to mother's without and with antibodies to the HAV virus, did not retain HAV protection from vaccination, respectively. Additionally, 4% of group three children born to anti-HAV negative mothers lost HAV protection.

"Our study demonstrates that seropositivity to hepatitis A persists for at least ten years after primary vaccination with two-dose inactivated HAV vaccine when administered to children at ages 12 months and older, regardless of their mothers' anti-HAV status," concludes Dr. Sharapov. "These findings support current CDC/ACIP guidelines for routine administration of two doses of inactivated hepatitis A vaccine to all children in the U.S. beginning at the age of 12 months." The authors point out that a future booster dose may be necessary to maintain protection against HAV and they will continue follow-up participants into their teens to monitor benefit of the initial immunization.

**More information:** "Persistence of Hepatitis A Vaccine Induced Seropositivity in Infants and Young Children by Maternal Antibody Status: 10-Year Follow-Up." Umid M. Sharapov, Lisa R. Bulkow, Susan E. Negus, Philip R. Spradling, Chriss Homan, Jan Drobeniuc, Michael Bruce, Saleem Kamili, Dale J. Hu, Brian J. McMahon. *Hepatology*; [DOI: 10.1002/hep.25687](https://doi.org/10.1002/hep.25687)); Print Issue Date: August, 2012.

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