

Readers Forum

DTP-Hib Combination

Vaccine manufacturers promote DTP + Hib combination products for primary immunization. However, Recommended Childhood and Adolescent Immunization Schedule - United States July-December 2004 states as follows:

DtaP/Hib combination products should not be used for primary vaccination in infants but can be used as boosters after any Hib vaccine. The committee had made the same recommendation 6 months earlier. What should we do?

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Reply

It should be clearly understood that in US DTwP is not used in infant and adolescent immunization either in monovalent or combination formulation. In India all the Hib conjugate combination vaccine formulation are containing only DTwP. The efficacy and immune response of Hib component in the DTwP-Hib combination formulation have not been questioned and many other developing countries also recommend their use either in monovalent or combination formulation.

Hence in India IAP also recommends the use of DTwP-Hib combination formulation as well as DTwP-HB-Hib combination formulation wherever indicated.

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Preservatives in DPT Vaccine

Each dose of DPT vaccine contains 0.025 mg of mercury as thimersol and 1.25 mg of aluminium phosphate. Some preparations of hepatitis B vaccine, specially in multidose vials contain 0.025 mg of mercury as thimersol and 0.25 mg of aluminium hydroxide. There is still an ongoing debate whether mercury contained in the vaccine causes toxic effects on neurodevelopment of children and autism.

Cumulative doses of mercury and aluminium after three doses of DPT vaccine would be 0.075 mg and 4.5 mg of mercury and aluminium respectively. Adverse effect of mercury on the body depends on the load of mercury, period during which mercury has been administered, *i.e.*, if mercury has been administered at short or long intervals and the body mass.

A different immunization schedule for three doses of DPT vaccine administered at 8, 16 and 24 weeks would pose least harm because the metals are administered over a longer period of time, as compared to the conventional schedule at 6, 10, and 14 weeks. Also, distribution of mercury/aluminium per kg body weight would be lesser, because the infant has a higher weight in the 8, 16 and 24 weeks schedule. Studies have shown that