



Bulletin No. 12

August 15, 1986

FRACTIONAL DOSES OF DTP VACCINE -- NOT RECOMMENDED

Administration of fractional (reduced) doses of DTP vaccine has been advocated by some as a way to reduce side effects from DTP vaccinations, associated with the pertussis component. "Fractional doses" of DTP vaccine have been interpreted in two ways: giving less than the recommended dose of 0.5 ml, or giving the total dose over a longer period of time by giving multiple smaller doses. Neither practice is recommended by the American Academy of Pediatrics or the Advisory Committee on Immunization Practices.

If a child has had a reaction to DTP vaccine that constitutes a contraindication to additional doses, that child should not be exposed to any amount of DTP vaccine subsequently. Significant reactions--e.g. convulsions, fever of 105°F or above, hyperresponsive state--are relatively unusual; they probably represent an idiosyncratic reaction on the part of the vaccinee. Giving a smaller dose will not assure that such reactions will not recur.

Local reactions and fever are common following DTP vaccination. Most, but not all, studies indicate that they can be diminished somewhat by giving a smaller dose. Most studies also indicate, however, that giving reduced doses yields lower antibody titers and probably confers less protection. Giving less than the recommended dose would, therefore, be ill-advised. The reduction in common mild reactions that may be achieved with a partial dose is not worth the cost of reduced protection. Giving multiple small doses might conceivably be harmful if the rarer, more serious side effects are actually due to hypersensitivity. In any case, administration of a larger number of doses would increase the likelihood of having a temporally related, but etiologically unrelated, adverse event occur. For these reasons, "fractional doses" of pertussis vaccine are not recommended.

(From the Committee on Infectious Diseases, American Academy of Pediatrics.)

SERIOUS ADVERSE EFFECTS FOLLOWING PERTUSSIS VACCINE

1. Risk of serious events which are followed by full recovery:
 - Persistent, unusual high-pitched crying - 1/1000 injections
 - Convulsion(s) - 1/1750 injections
 - Hypotonic, hyporesponsive episode - 1/1750 injections
2. Risk of permanent brain damage - 1/310,000 injections

(From California Morbidity Weekly Report, Vol. No. 30, August 2, 1985 from the Infectious Disease Section, State Department of Health Services.)