

# Undervaccination appears associated with increased risk of whooping cough

September 9 2013

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Undervaccination with the diphtheria, tetanus toxoids and acellular pertussis (DTaP) vaccine appears to be associated with an increased risk of pertussis (whooping cough) in children 3 to 36 months of age, according to a study in *JAMA Pediatrics* by Jason M. Glanz, Ph.D., of the Institute for Health Research at Kaiser Permanente Colorado, Denver.

"Undervaccination is an increasing trend that potentially places [children](#) and their communities at an [increased risk](#) for serious infectious disease," according to the study.

The study involved children born between 2004 and 2008 and cared for at eight managed care organizations. Each child with laboratory-confirmed pertussis (72 patients) was matched to four randomly selected control patients for a total of 288 controls.

Undervaccination was defined as missing any of four scheduled doses of the DTaP vaccine. Of 72 case patients with pertussis, 34 (47.22 percent) were undervaccinated for DTaP vaccine by the date of pertussis diagnosis compared to 64 (22.2 percent) of the control patients. Children undervaccinated for three or four doses of DTaP vaccine were 18.56 and 28.38 times more likely, respectively, to have received a diagnosis of pertussis than children who were age-appropriately vaccinated, the study reports.

"Undervaccination with DTaP [vaccine](#) increases the risk of [pertussis](#)

among children 3 to 36 months of age," the study concludes.

**More information:** JAMA Pediatr. Published online September 9, 2013. [DOI: 10.1001/jamapediatrics.2013.2353](https://doi.org/10.1001/jamapediatrics.2013.2353)

Provided by The JAMA Network Journals

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