

PERTUSSIS (WHOOPING COUGH) VACCINE

Is the Pertussis vaccination safe in pregnancy?

Pertussis-containing vaccine (whooping cough vaccine) has been used routinely in pregnant women in the UK since October 2012, and the Medicines and Healthcare Products Regulatory Agency (MHRA) is carefully monitoring its safety. The [MHRA's study of around 20,000 vaccinated women](#) has found no evidence of risks to pregnancy or babies.

Is Pertussis vaccination in pregnancy working?

Yes, it is. Published research from the UK vaccination program shows that vaccinating pregnant women against whooping cough has been highly effective in protecting young babies until they can have their first vaccination when they are two months old.

Babies born to women vaccinated at least a week before birth had a 91% reduced risk of becoming ill with whooping cough in their first weeks of life, compared to babies whose mothers had not been vaccinated. An additional benefit is that the protection the mother receives from the vaccination will lower her own risk of infection and of passing whooping cough on to her baby. ⁽¹⁾

In October 2012, the Advisory Committee on Immunization Practices (ACIP) voted to recommend that healthcare personnel should administer a dose of Tdap during each pregnancy irrespective of the patient's prior history of receiving Tdap (or Td). To maximize the maternal antibody response and passive antibody transfer to the infant, optimal timing for Tdap administration is between 27 and 36 weeks gestation. This recommendation is supported by the [American College of Obstetricians and Gynecologists \(ACOG\)](#) and the [American College of Nurse-Midwives](#).

The United States is experiencing a resurgence of the pertussis. Since 2010, we see between 10,000 and 50,000 cases of pertussis each year and cases are reported in every state. In 2012, we saw the most cases we had seen in 60 years. There were 48,277 reported cases of pertussis; 2,269 of those cases were in infants younger than 3 months of age – 15 of those infants died.

Tdap Vaccine Safety for Mother and Infant

Both the CDC and the FDA monitor vaccine safety through the Vaccine Adverse Event Reporting System (VAERS), a national vaccine safety surveillance program. Published studies that include VAERS data support the safe use of Tdap vaccine during pregnancy. To date, no safety signals have been found among pregnant women or their babies after Tdap vaccination.

Both diphtheria toxoids (Td) and tetanus toxoid (TT) vaccines have been used extensively in pregnant women worldwide since the 1960s to prevent neonatal tetanus. Td and TT vaccines administered during pregnancy have not been shown to harm either the mother or baby/fetus.

Common Side Effects from Tdap Vaccination

Most side effects from Tdap vaccination are mild or moderate, and self-resolving. The most common side effects include redness, swelling, and tenderness at the injection site, body-ache, fatigue, or fever. Severe side effects are extremely rare, especially in adults.

Breastfeeding Safety after Tdap Vaccination

Breastfeeding is not a contraindication for receiving Tdap vaccine and is, in fact, fully compatible with Tdap vaccination. Tdap vaccine can and should be given during pregnancy to women who plan to breastfeed.

Co-administration of Pertussis and Flu Vaccines

Pertussis and flu vaccines can safely be coadministered to pregnant women. Pregnant women should receive the flu vaccine as early as possible in the flu season, during any trimester, while the pertussis vaccine is recommended later in pregnancy (between 27 and 36 weeks gestation).

Pertussis Vaccines Do Not Contain Thimerosal

Effectiveness of Pertussis Vaccines

(note: Tdap is the one used for adults, DTaP for children)

CDC's current estimate is that Tdap vaccination protects against pertussis in about 70% of people who receive it, but that protection fades over time. The long-term effectiveness of Tdap is still being studied. Adolescents and adults who get Tdap and still get pertussis have fewer coughing fits, shorter illness, and are less likely to suffer from disease complications.

DTaP vaccination is effective for 80%-90% of children who receive it. Among children who get all 5 doses of DTaP vaccine on schedule, effectiveness is very high within the year following the 5th dose – nearly all children (98%) are fully protected. In general, there is a modest decrease in effectiveness in each year following the last dose. About 70% of children are fully protected 5 years after getting their last dose of DTaP and the other 30% are protected against serious disease. (2)

(1) This content was taken from the UK National Health Service site (<http://www.nhs.uk/conditions/pregnancy-and-baby/pages/whooping-cough-vaccination-pregnant.aspx>)

(2) The content below was taken from the US Centre for Disease Control site (<http://www.cdc.gov/vaccines/vpd-vac/pertussis/tdap-pregnancy-hcp.htm>).