

Type: Coursework

Subject: Pharmacology & Nursing Care

Subject area: Nursing

Education Level: Undergraduate/College

Length: 1 pages

Referencing style: APA

Preferred English: US English

Spacing Option: Double

Title: Vaccines

Instructions: choose one vaccine that may be given to a child. with these discussions review safety concerns and clinical effectiveness in promoting health across the lifespan.

## DTaP vaccine

Name

Module

Module Code

Diphtheria is a disease that leads to challenges in breathing and can also lead to heart failure (Prasad and Rai, 2018). Tetanus is a disease that causes extreme pain in muscles and patients may also have challenges in swallowing. Pertussis, which is also known as whooping cough causes extreme coughing, brain damage and convulsions among other adverse effects (Domínguez et al. 2017). Children are therefore administered with DTaP vaccine to prevent diphtheria, tetanus and pertussis. For children to be fully vaccinated against the three

diseases, the vaccine has to be administered in five doses of 2 months, 4 months, 6 months, 15-18 months, and 4-6 years.

DTaP vaccine is considered 80 to 90 percent effective in protecting children against diphtheria, tetanus and pertussis. Conway et al. (2020) conducted a research to evaluate the effectiveness of DAPTACEL™ which is a DTaP vaccine. The research demonstrated that protective efficacy of DAPTACEL™ against mild pertussis was 77.9% (95% CI=72.6%--82.2%). The study demonstrated that Swedish children were successfully vaccinated against pertussis after being administered with DAPTACEL™ at ages of ages 2, 4, and 6 months and follow up conducted 2 years after the third dose of vaccine.

There are various forms of DTaP vaccines including Daptacel®, Infanrix®, Kinrix® and Pediarix® among others (Domachowske and Suryadevara, 2020). DTaP vaccines are safe and effective in preventing diphtheria, tetanus and pertussis. Children administered with the DTaP vaccines may experience various common side effects including soreness where the shots are given, irritation, vomiting, fever and loss of appetite. The side effects are usually experienced one to three days after administration.

DTaP vaccines should not be administered to children beyond the age of seven years. DTaP vaccines should also not be administered if the children have a history of severe allergic reactions from previous dosages of the vaccine, had a coma or repeated seizures, suffer from the Guillain-Barré Syndrome (GBS) condition and has experienced severe pain after being administered with DTap previously (Stalpers et al. 2021).

## References

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Domachowske, J., & Suryadevara, M. (2020). Diphtheria Infection Etiology. *Vaccines: A Clinical Overview and Practical Guide*, 131.

Prasad, P. L., & Rai, P. L. (2018). Prospective study of diphtheria for neurological complications. *Journal of pediatric neurosciences*, 13(3), 313.

Stalpers, C. A., Retmana, I. A., Pennings, J. L., Vandebriel, R. J., Hendriksen, C. F., Akkermans, A. M., & Hoefnagel, M. H. (2021). Variability of in vivo potency tests of Diphtheria, Tetanus and acellular Pertussis (DTaP) vaccines. *Vaccine*, 39(18), 2506-2516.