



# QUESTIONS

# Q & A

FOR PARENTS ANSWERS

## DPT VACCINES

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### What is Diphtheria, Pertussis and Tetanus?

- ❖ **DIPHTHERIA** is usually transmitted by the airborne route. It presents with fever, throat pain and swellings in the neck. Severe cases may progress and result in breathing problems. Some days after the infection, it can cause paralysis, and heart failure. India has the maximum number of reported Diphtheria cases in the world.
- ❖ **PERTUSSIS**, also known as Whooping cough, is an airborne disease. It results in cough lasting for 4-6 weeks. Severe cough spells can result in breathing difficulty and difficulty in eating and drinking. It can occur in all age groups, with the maximum damage occurring in very young infants. It can cause pneumonia, fits, brain damage, or death.
- ❖ **TETANUS** is caused by contaminated wounds or can occur in the newborn following unsafe delivery practices. It causes painful spasm of muscles and inability to swallow, giving it the popular name of “lockjaw”.
- ❖ **DPT** vaccine protects the child from 3 disease: diphtheria, whooping cough (pertussis), and tetanus.

### Which are the available vaccines?

These vaccines are available as combinations, DPT (Triple antigen), DPT/Hib (Quadrivalent), DPT/HBV/Hib (Pentavalent) and DPT/HBV/Hib/IPV (Hexavalent). Some vaccines for use in children above 7 years of age and adults, contain reduced dose of Diphtheria and Pertussis components, with full dose of Tetanus. These are Tdap and Td vaccines, respectively.

### What are the types of vaccines against Pertussis?

- ❖ There are two types of vaccines against Pertussis: whole cell P (wP) and the acellular P (aP).
- ❖ The wP vaccine is the older vaccine. It is made of killed B. pertussis germs, which cause Pertussis. It includes all the components of the B.pertussis. It has been replaced by aP vaccines in the developed countries. However, worldwide, wP vaccines are the most widely used Pertussis vaccines.
- ❖ The aP vaccine is a purified form of Pertussis vaccine and consists of only those components that are believed to be important for protection against Pertussis.

### What is the Schedule of DPT vaccines?

- ❖ 3 doses are administered in the 1<sup>st</sup> year at 6-10-14 weeks of age, 1<sup>st</sup> booster in the 2<sup>nd</sup> years at 16-18 months and a 2<sup>nd</sup> booster at 4-6 years. They are administered as age appropriate combination vaccines with Hepatitis B, Hib, and IPV.
- ❖ Adolescents should also receive one dose of Tdap vaccine at 10-12 years of age.
- ❖ Td is recommended every 10 years thereafter.
- ❖ Pregnant women should receive 1 dose of Tdap (Td vaccine as a second alternative), between 27-36 weeks of pregnancy, during every pregnancy.
- ❖ Td vaccine is also used for tetanus prophylaxis after skin breaching injuries/trauma.

### What are the differences between wP and aP vaccines?

- ❖ wP vaccines have been shown to have a longer duration of protection, they reduce spread of the disease to others and induce a superior long-term protection against Pertussis, as compared to aP vaccines.
- ❖ Generally, wP vaccines cause more fever, pain and swelling at the site of vaccination, as compared to aP vaccines.
- ❖ Fever, redness, pain and swelling at the site of the injection, drowsiness and refusal of feeds are common side effects. These resolve within 48 hours.

### **What are the side effects of DPT vaccines?**

- ✦ Serious side effects include fever  $>40^{\circ}\text{C}$ , fits and less responsiveness (Hyporesponsive Hypotensive Episodes).
- ✦ These side effects are greatly reduced with the aP vaccines

### **When should I be concerned about the side effects?**

If your child has high fever ( $>40^{\circ}\text{C}$ ), fits, less responsiveness and lethargy or the common side effects lasting for more the 72 hours, consult your doctor

### **Who should receive this vaccine?**

All infants and children should receive this vaccine

### **Who should not receive the DPT vaccines?**

- ✦ Any child who has developed severe allergies following the previous dose of the vaccine or has known severe allergies against any vaccine component.
- ✦ Any child who has developed multiple fits and altered consciousness after a previous dose, such children should preferably receive the aP vaccines

### **What is the Indian Academy of Pediatrics (IAP) recommendations?**

The IAP recommends either of the Pertussis vaccines for use in children. While both types of Pertussis vaccines give similar protection against proven Pertussis in the first 2-3 years of life, the wP vaccines induce significantly superior long-term protection.

**For more information, please contact your doctor.**

