

Information on Combined Diphtheria, Tetanus, acellular Pertussis (reduced dose) and Inactivated Poliovirus Vaccine (dTAp-IPV)

● **Diphtheria**

It is caused by the bacteria *Corynebacterium diphtheriae*. Symptoms include fever, sore throat with patches of greyish membrane adhered to the throat and difficulty in breathing. In serious cases, it can cause airway obstruction, heart failure, nerve damage or even death. The disease is spread by contact with patients or carriers. Less commonly, a person may get infected through contact with articles soiled with discharges from the affected persons.

● **Tetanus**

It is caused by the bacteria *Clostridium tetani*. The bacteria get into the body through a break in the skin and produce a toxin that attacks the nervous system. It can cause painful muscular contractions at the jaws and the neck. The trunk is sometimes also affected and generalized spasms of muscles may occur. When tetanus affects respiratory muscles that are used for breathing, the patient can die very quickly.

● **Pertussis**

It is also known as "whooping cough" and is caused by the bacteria *Bordetella pertussis* through direct contact with the patient's droplets. An infected person may initially have non-specific symptoms like runny nose, sneezing, low-grade fever and mild cough. However, the cough may gradually become more severe and spells of violent coughing can interfere with eating, drinking and breathing. The bacteria can cause lung infection, and even lead to seizures and coma in severe cases.

● **Poliomyelitis**

It is caused by one of the 3 types of Poliovirus (type 1, type 2, and type 3). The virus enters the body through oral route and eventually invades the central nervous system causing illness. It can cause fever, headache, vomiting, abdominal discomfort, muscle pain, stiffness in the neck and back, and paralysis. Most patients will recover, but in severe cases, it can lead to permanent disability and even death.

《 The above four types of diseases can all be effectively prevented by immunisation with Combined Diphtheria, Tetanus, acellular Pertussis (reduced dose) & Inactivated Poliovirus Vaccine (dTAp-IPV) 》

(I) Who should get this immunisation?

According to the Hong Kong Childhood Immunisation Programme, the 3-dose primary series of immunisation against the above diseases should be completed **in the first year of life**. Three booster doses should be given **at 1½ years of age, primary 1 and primary 6** in order to maintain long-lasting protection.

(II) Children with the following conditions should not receive dTap-IPV

- (1) Anaphylactic reaction to any of the vaccine components or following a previous dose of Diphtheria, Tetanus, Pertussis or Inactivated Poliovirus vaccine.
- (2) Encephalopathy not due to an identifiable cause occurring within 7 days following a previous dose of DTaP-IPV or a pertussis-containing vaccine.
- (3) Anaphylactic reaction to Glutaraldehyde, Neomycin, Streptomycin or Polymyxin B.

(III) Points to note before immunisation

- (1) Student with a mild cold or cough on the day of vaccination can receive the vaccine. However, it should be postponed until recovery if the student has a fever.
- (2) Parents should consult their family doctors beforehand if the students have the following conditions :
 - the occurrence of the following after a previous pertussis-containing vaccine :
 - within 48 hours of immunisation > temperature above 40.5 °C (105 °F) with no other identifiable causes
 - > collapse or shock-like state (hypotonic hyporesponsive episode)
 - > persistent crying lasting for 3 hours or more
 - convulsions occurring within 3 days after immunisation
 - history of Guillain-Barré Syndrome occurring within 6 weeks after a tetanus toxoid-containing vaccine
 - known or suspected neurologic condition (e.g. progressive encephalopathy, uncontrolled epilepsy, etc.)
 - under treatment that will weaken immunity, such as steroid, irradiation or cytotoxic drugs; or
 - bleeding tendency.

(IV) Possible reactions after immunisation

Most children do not have serious reactions after receiving dTap-IPV. Some children may have the following adverse events after immunisation :

- (1) Mild and short lasting side effects, including headache, tiredness, nausea, vomiting, diarrhea, stomach ache.
- (2) If there is any pain, redness or swelling at the injection site, parents may apply cold compress to relieve the symptoms; and some may develop fatigue or gastrointestinal symptoms after immunisation.
- (3) If a fever occurs, parents may provide the child with antipyretic medication (e.g. paracetamol) to relieve the symptoms.
- (4) Development of breathing difficulty or coma soon after immunisation is extremely rare. Parents should bring their children to hospitals for treatment immediately if such conditions occur.