**Child's Immunization**

**Learning objectives**

* To know the definition of immunity and immunization
* To know the (type, route, doses, side effects and contraindication) of vaccines
* To know the Iraqi immunization schedule
* To understand the nurse role toward immunization

**Immunity**:Protection against a disease. There are two types of immunity, passive and active.

**Immunization:** The process by which a person or animal becomes protected against a disease. This term is often used interchangeably with vaccination or inoculation.

**Vaccination:** Injection of a killed or weakened infectious organism in order to prevent the disease.

**Vaccine:** A product that produces immunity therefore protecting the body from the disease. Vaccines are administered through needle injections, by mouth and by aerosol.

**Types of Vaccines**

There are a few different types of vaccines. They include:

* **Attenuated** **(weakened)** live viruses are used in some vaccines such as in the measles, mumps, and rubella (MMR) vaccine.
* **Killed** **(inactivated)** viruses or bacteria are used in some vaccines, such as in IPV.
* **Toxoid vaccines** contain an inactivated toxin produced by the bacterium. For example, the diphtheria and tetanus vaccines are toxoid vaccines.
* **Conjugate vaccines** (such as Hib) contain parts of bacteria combined with proteins.

### Indication of Immunization

* Immunizations protect you or your child from dangerous diseases.
* They help reduce the spread of disease to others.
* Vaccines protect not only yourself but also others around you
* Getting immunized costs less than getting treated for the diseases that the shots protect you from.
* **Immunization protects future generations**
* When immunization rates drop below a certain level, preventable diseases show up again.
* Decrease morbidity and mortality of disease

**Vaccination schedule in Iraq by child age**

* At birth: BCG, OPV-0, HBV-1
* 2 months: (DTP-1, Hib1, and HBV-2), OPV1 and Rotavirus1.
* 4 months: Quadruple vaccine (DTP-2 and Hib2) OPV2 and Rotavirus2.
* 6 months: (DTP-3, Hib3, and HBV-3), OPV3 and Rotavirus3.
* 9 months: Measles
* 15 months: MMR1
* 18 months: booster dose (DTP 1, and Hib) OPV 1.
* 4-6 years: booster dose DTP2, OPV 2 and MMR

**Summary of immunization by dose ,route and age**

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| Vaccine name | Dosage | Route | Child age |
| Bacille Calmette-Guérin (BCG) Vaccine | 0.5 mL | ID | At birth |
| OPV oral polio vaccine | 0.5 mL | Oral | 2 months , at 4 months . at 6-18 months A booster dose at 4-6 years |
| Hepatitis B (HB) vaccine | 10 mc or  5 mcg g | IM | At birth ,2 m and 6 months |
| Haemophilus influenzae type b  (Hib) | 0.5 mL | IM | 2 m ,4 m and 6 months |
| Diphtheria , pertussis  and tetanus toxiod (DTaP)  Dosage: | 0.5 mL | IM | 2 M,4 M and 6 month |
| Rotavirus (RV) | 2.0 mL | Oral | 2 months , at 4 months . at 6-18 months |
| Measles | 0.5 mL | Sc | 9 months |
| Measles, mumps, rubella  (MMR) vaccine | 0.5 mL | Sc | 15 months |

## Side Effects of Vaccines

* Fever
* soreness
* lump under the skin where the shot was given.
* redness at the injection site

**Contraindication of Vaccines**

* If your child has had a serious reaction to the first dose . ( Anaphylactic reaction)
* Children who have certain types of cancer
* Congenital immunodeficiency
* Who are taking drugs that lower the body's ability to resist infection
* BCG should not be given to eczema live vaccines are contraindicated in pregnancy and in t
* children who are on systemic steroid therapy or immune suppressed for any reason

pregnancy

**Nursing Before Giving the Vaccines**

1. Is the child sick today

2. Does the child have allergies reaction before or after a vaccination ?

3. Does the child have problem with immune system due to disease or medication

4. if the child gotten a transfusion, or any other blood product, recently

5. Does the child have problem with nervous system such as convulsions?

**Nursing care before giving immunization**

* Hand washing
* Gloves NOT required (only if potential exposure to body fluids from a lesion)
* Proper equipment and means of needle disposal

a-1or 3 mL syringe with 22-25 g needle

b- needle safety device

* Check expiration date
* Document lot number on chart

nursing consideration during immunization

ask about previous reaction to immunization

* Use caution in pregnancy--**Pregnancy Category C;** safety not established.
* Defer administration in case of acute infection.
* Provide comfort measures to help the patient cope with the discomforts of the injection: analgesics
* Provide patient with written record of immunization and timing for booster immunization.
* Following administration of vaccines, nurses should strongly consider observing patients for syncope and other immediate allergic reactions for a period of 15-20 minutes,
* Another key aspect of safety is proper storage, handling, and administration of vaccines. Storage temperatures and expiration dates
* screening all vaccine recipients for contraindications and precautions prior to administering immunizations.

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