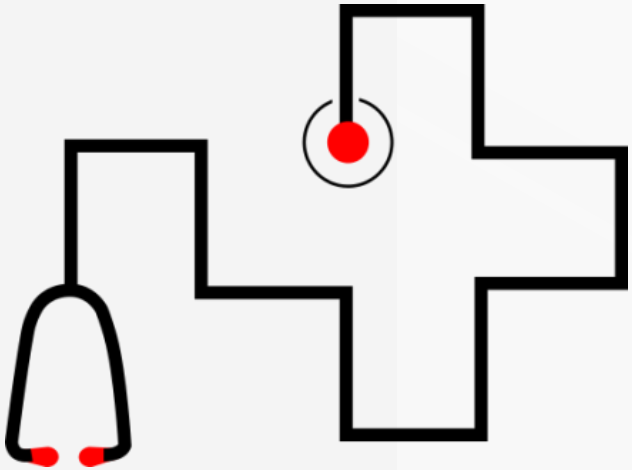

# Immunization


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Mohammed Sasi.

# WORLD IMMUNIZATION WEEK

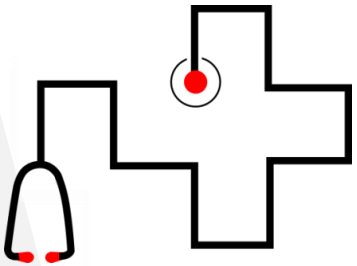
## 24 April to 30 April

**This year's theme: "Protected Together #VaccinesWork"**

World Health Organization

Protected Together

#VACCINESWORK



# By the end of this presentation you will be able to:

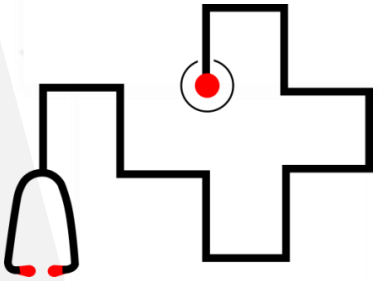
01 Define Immunization and Vaccination

02 List types of immunization

03 Explain how vaccines work

04 List routes of vaccines' administration

# By the end of this presentation you will be able to:



05 Discuss the immunization schedule in Libya

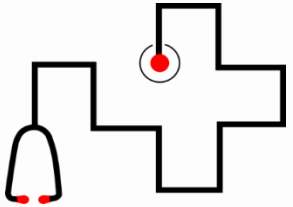
06 List advantages & disadvantages of immunization

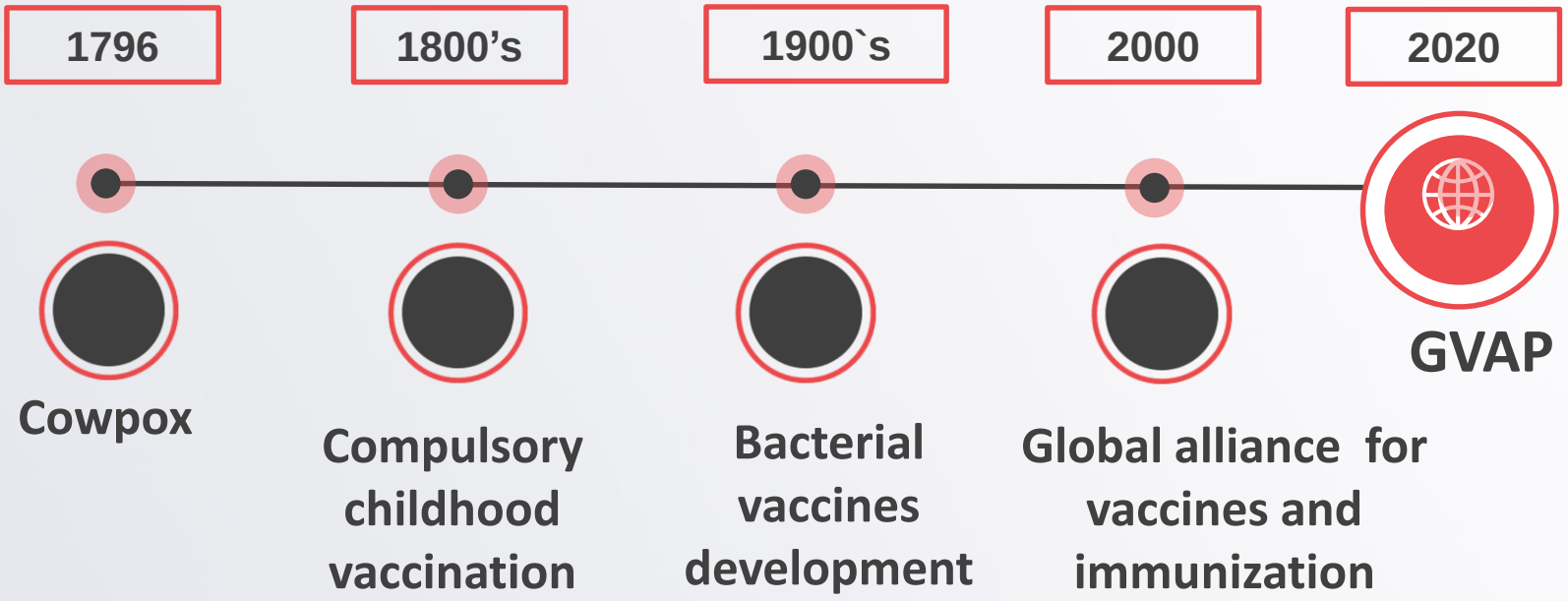
07 Describe the role of pharmacist in Immunization

# Introduction

Through the use of **immunization**, some infections and diseases have almost completely been eradicated throughout the World.

# History of Immunization

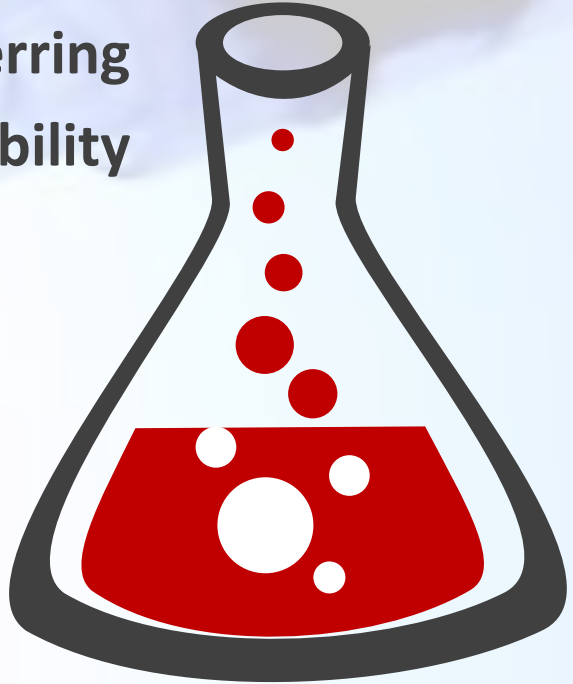




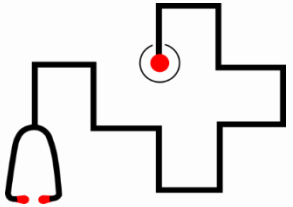
# Define Immunization & Vaccine

- **Immunization** is the process of conferring increased resistance or decreased susceptibility to infections.

- **Vaccine** is a preparation of the causative agent of a disease, specially treated for use, in order to induce or increase the immunity.



# Types of Immunization



## Active Immunization

- Individuals make their own **antibodies**.
- Achieved through natural infection (**natural measles virus**).
- Or acquired artificially by vaccines (**live, inactivated or toxoid**).

## Passive Immunization

- Individual gains **antibodies** from another who has produced them.
- Transfer of maternal antibodies through the **placenta** or **breast** milk.
- Administration of antibodies collected from actively immune **humans** or **animals**.

# Types of Vaccines

01 Live, Attenuated Vaccines e.g. (OPV)

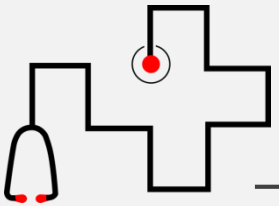
02 Killed or Inactivated Vaccines e.g. (IPV)

03 Toxoids e.g. (Tetanus)

04 Subunit and Conjugate Vaccines. e.g. (Hib)

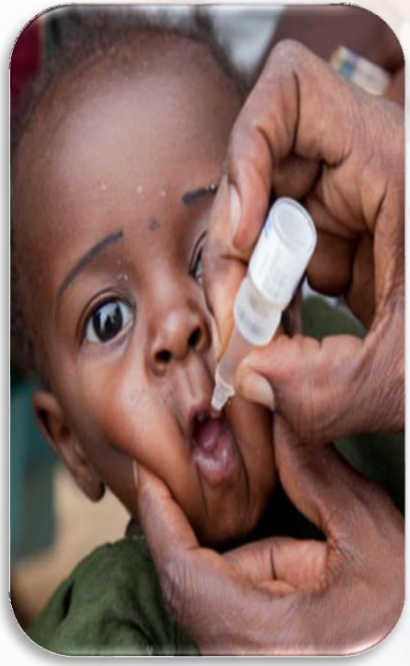
# How Exactly Vaccines Work!

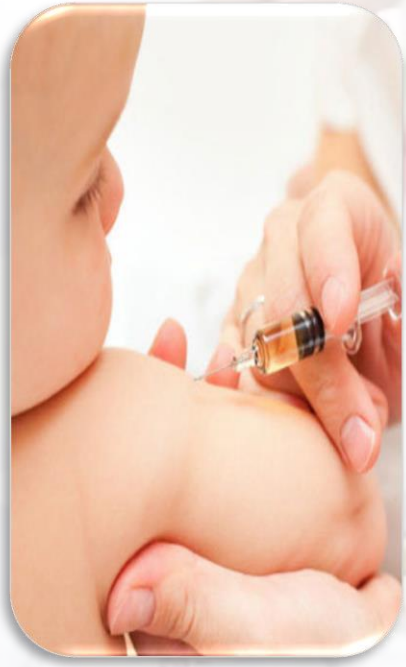
- Vaccines are basically consisted of a ’Weak’ or ‘Dead’ version of the virus which causes disease.
- By injecting a deadly virus in the body, the immune system gets stronger and the virus won’t affect the body again.
- The child’s immune system will be developed enough to recognize and deal with such deadly threats in the future.

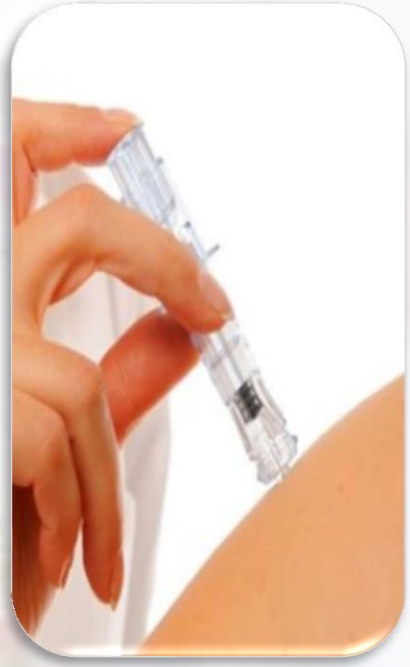


# Routes of vaccines' administration

- *Oral*
- *Intramuscular*
- *Subcutaneous*
- *Intradermal*







# Immunization Schedule in Libya

## ❖After birth directly

**1- B.C.G:** Bacillus Calmette–Guérinis is a vaccine primarily used against Tuberculosis.

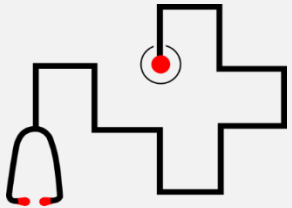
**2- O.P.V:** Oral Polio Vaccine to prevent Poliomyelitis .

**3- Hep.B:** Hepatitis B Vaccine is a vaccine that prevents Hepatitis B.

# Immunization Schedule in Libya

## ❖At two, four & six months

1. **HEXA:** is a combination vaccine that protects infants from six diseases. This vaccine requires three doses at 2,4 & 6 months. They are DTaP-IPV-HepB.



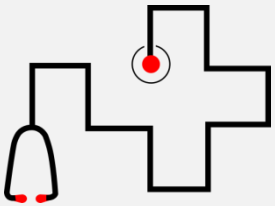
It Protects against Diphtheria, Tetanus, Whooping cough, Polio, Hepatitis B and Haemophilus Influenzae type b (Hib).

# Immunization Schedule in Libya

**2. Rotavirus Vaccine**

**protects against Rotavirus which causes acute gastroenteritis, which can lead to severe diarrhea and vomiting among infants and children worldwide**

**It is given in 3 doses at ages 2 / 4 & 6 months.**



**3. PCV: are Vaccines to protect infants against Pneumococcal Disease.**

# Immunization Schedule in Libya

## ❖At nine months

**1- O.P.V:** Oral Polio Vaccine to prevent Polio.

**2-Meningococcal V:** are Vaccines to prevent Meningococcal Diseases.

# Immunization Schedule in Libya

## ❖At 12 months

**1- MMR:** Protects against Measles, Mumps & Rubella.

**2- Meningococcal V:** Prevent Meningococcal Disease.

**3- PCV:** Prevent Pneumococcal Disease.

# Immunization Schedule in Libya

## ❖At 18 months

**1- O.P.V:** Oral Polio Vaccine used to prevent (polio).

**2- DTaP:** Protects against Diphtheria, Tetanus, Pertussis (whooping cough).

**3- MMR:** Against Measles, Mumps, and Rubella.

# Immunization Schedule in Libya

## ❖At 6 years

**1- O.P.V:** Oral Polio used to prevent Poliomyelitis.

**2- Td adult:** Protects against Diphtheria & Tetanus.

**3- Meningococcal V:** Prevent Meningococcal Disease.

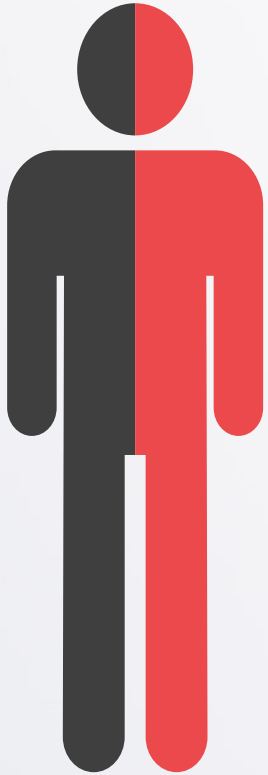
# Advantages and Disadvantages of Vaccinations

Protects against diseases.

Prevents epidemics.

Prevents spreading the disease to others.

Prevents the potential greater cost treating the infected patients.



Not guaranteed to work or provide 100% protection.

Possible side effects.

Costs to the health system.

Emergence of resistance.

Can be unpleasant or painful.

# Role of Pharmacist in Immunization

- From the mid-1800s until shortly before the 21st century pharmacist been involved effectively in all stages of immunization.
- In 1994 fifty pharmacists attend the first organized immunization training program in Seattle to enhance the modern role of pharmacists in VPD (Vaccines preventable diseases).

# Role of Pharmacist in Immunization

01 Participating in the planning of introduction of Immunization programs.

02 Advising on optimizing the use of vaccines in cases of emergencies.

03 Providing information on the handling and storage of vaccines.

# Role of Pharmacist in Immunization

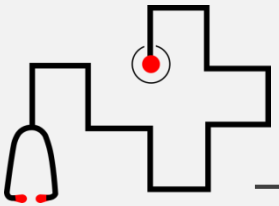
04 Pharmacists play a role in disease prevention by advocating and administering immunizations.

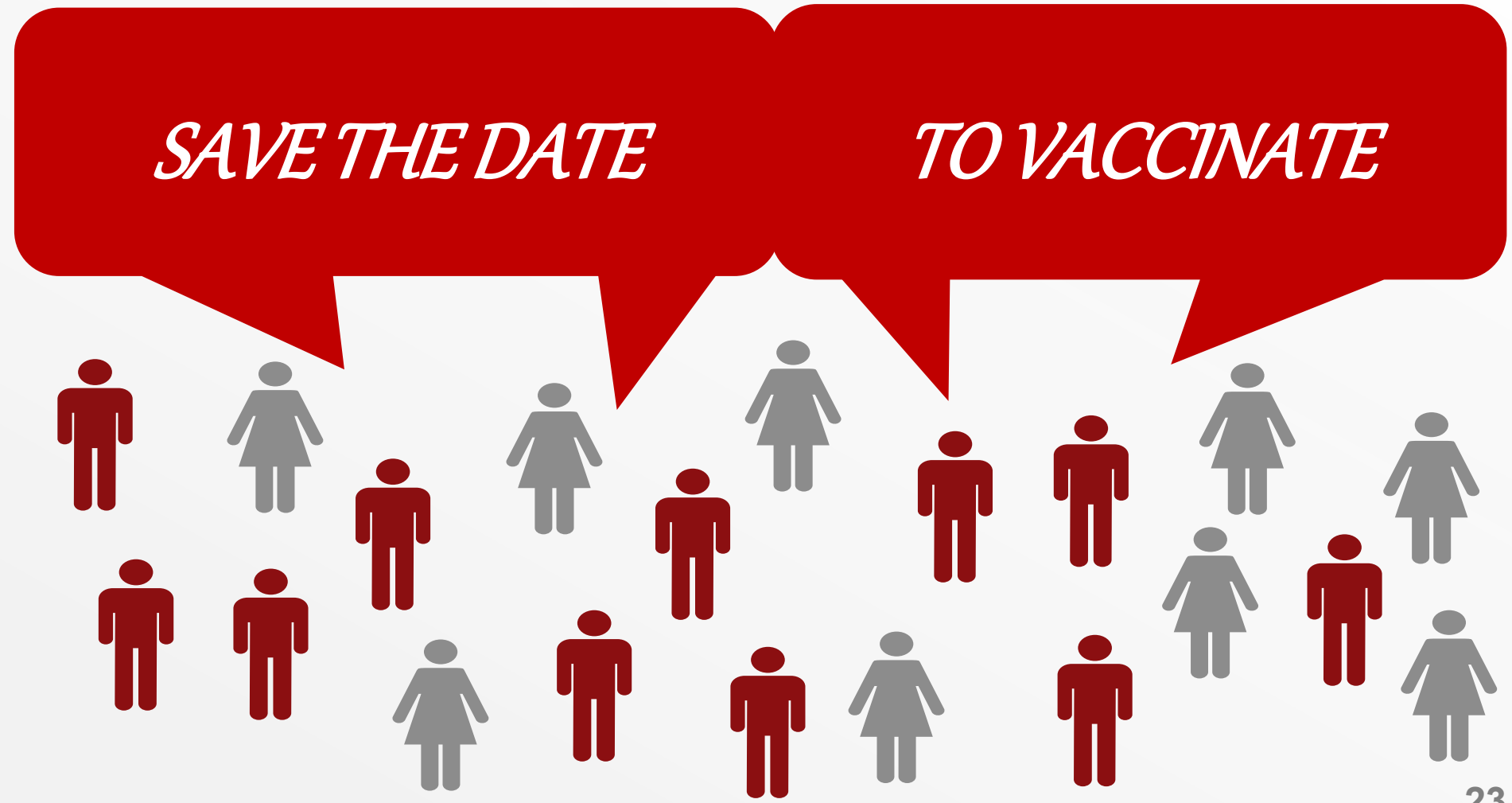
05 Play an important role in patients' Counseling and education.

06 Documentation

# Summary

- **Immunization** is a proven tool for controlling and eliminating life threatening infectious diseases.
- Immunization is the most effective and the **safest health** investment.
- **Vaccines** must be accessible to even the most hard to reach and vulnerable population.

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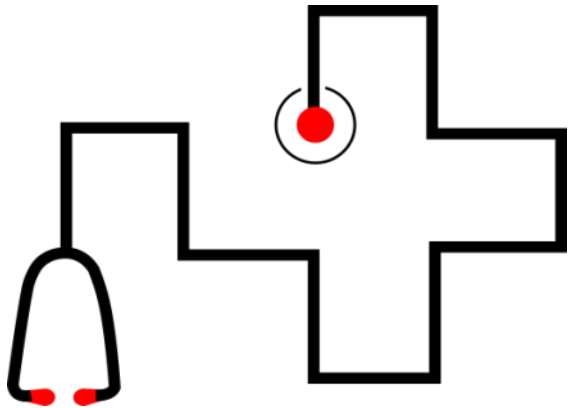
TO VACCINATE



# Thank you