

Pre-school Vaccination Schedule in KSA

**Nouf Altwaijri
Reham Alobaidan
Dana Fawzi
Haifa Almohsen
Kowthar Almosa**



**Mai alaqeel
Futoon Alnemari
Suha Alenazi
Wadha Alotaibi
Sara Alqahtani
Nouf Alabdulkareem**

Supervisor Dr. Salwa Tayel

National Immunization Schedule

جدول التطعيمات الوطني

تاريخ الزيارة التالية Next Visit Date	الختم Stamp	الأسم والتوقيع Name & Signature	التاريخ Date	التطعيم Vaccine	الزيارة Visit	
				• BCG • التهاب كبدى (ب) • Hepatitis B	• عند الولادة • دن • At Birth	
				• IPV • DTaP • Hepatitis B • Hib • Pneumococcal Conjugate (PCV)* • Rota**	• شلل أطفال معطل • الثلاثى البكتيري • التهاب الكبدى (ب) • المستدمية النزلية • البكتيريا العقدية الرئوية* • فيروس الروتا**	• عمر شهرين • 2 months
				• IPV • DTaP • Hepatitis B • Hib • Pneumococcal Conjugate (PCV)* • Rota**	• شلل أطفال معطل • الثلاثى البكتيري • التهاب الكبدى (ب) • المستدمية النزلية • البكتيريا العقدية الرئوية* • فيروس الروتا**	• عمر 4 شهور • 4 months
				• OPV • IPV • DTaP • Hepatitis B • Hib • Pneumococcal Conjugate (PCV)*	• شلل الأطفال الفموي • شلل أطفال معطل • الثلاثى البكتيري • التهاب الكبدى (ب) • المستدمية النزلية • البكتيريا العقدية الرئوية*	• عمر 6 شهور • 6 months
				• Measles • Meningococcal Conjugate quadrivalent (MCV4)	• الحصبة القرد • الحمى الشوكية الرباعي المقترون	• عمر 9 أشهر • 9 months
				• OPV • MMR • Pneumococcal Conjugate (PCV)* • Meningococcal Conjugate quadrivalent (MCV4)	• شلل الأطفال الفموي • الثلاثى الفيروسي • البكتيريا العقدية الرئوية* • الحمى الشوكية الرباعي المقترون	• عمر 12 شهر • 12 months
				• OPV • DTaP • Hib • MMR • Varicella • Hepatitis A	• شلل الأطفال الفموي • الثلاثى البكتيري • المستدمية النزلية • الثلاثى الفيروسي • الجدري المائي • التهاب الكبدى (أ)	• عمر 18 شهر • 18 months
				• Hepatitis A • OPV • DTaP (Td)*** • MMR • Varicella	• التهاب الكبدى (أ) • شلل الأطفال الفموي • الثلاثى البكتيري (الثلاثى البكتيري)*** • الثلاثى الفيروسي • الجدري المائي	• عمر 24 شهر • 24 months • عند دخول الصف • الأول الابتدائي • First class primary school age

مع تحيات وكالة الصحة العامة - برنامج التحصين الموسع

* Pneumococcal Conjugate (PCV13).

** Monovalent Rota vaccine.

*** (Td) start from 7 years of age.

• لقاح البكتيريا العقدية الرئوية (PCV13).

• لقاح الروتا الأحادي.

• يعطى الثلاثى البكتيري ابتداءً من 7 سنوات.

Tuberculosis

Nouf Altwaijri

Tuberculosis

Causative agent is?

Mycobacterium tuberculosis.

Types of TB?

- Latent TB.
- Active TB.

Which one has symptoms?

Active TB.

Classic symptoms are?

Chronic cough with blood-containing sputum, night sweats, fever, weight loss

Route of transmission is?

Spreads through the air

What does it affect?

Pulmonary and extrapulmonary

Management

1. Treatment:

- Taking several drugs from 6-9 months.
- The first-line anti-TB agents that form the core of treatment regimens are:
 - Isoniazid (INH)
 - Rifampin (RIF)
 - Ethambutol (EMB)
 - Pyrazinamide (PZA)

2. Vaccination:

BCG

BCG Vaccine

Type: Live attenuated vaccine.

Route of administration: ID injection.

Name: bacille Calmette-Guerin

- Offers 70-80% protection, great protection against meningitis TB, but weak against respiratory TB.

When do we give the vaccine?

- Given for children soon after birth.
- It is also given to people from ages 16-35.
- Never given to people over the age of 35.

Side effects:

- A scar at the injection site.
- Swollen lymph nodes
- Fever
- Blood in the urine
- Frequent or painful urination
- Upset stomach
- Vomiting
- Severe skin reaction (only occasionally).
- Anaphylactic reaction (very rare).
- Difficulty breathing or swallowing
- Wheezing

Contraindications:

- Immunosuppression
- Pregnancy

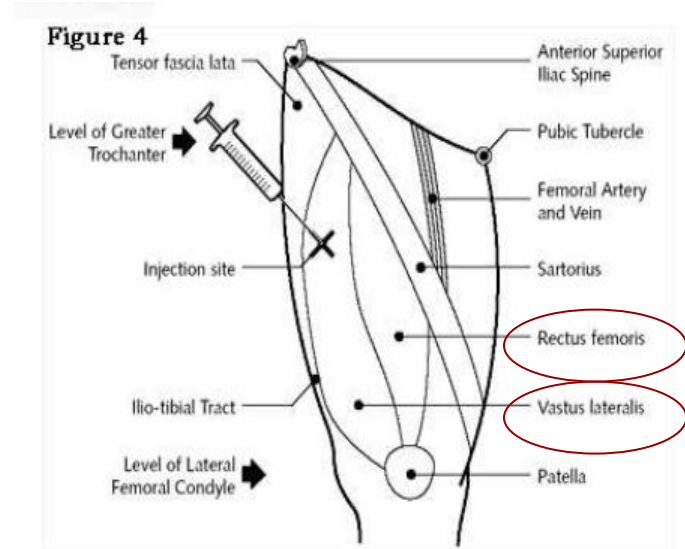


Reham AlObaidan

Hepatitis B vaccine is an **Inactivated subunit vaccine**
The vaccine is usually given as 3 or 4 shots over a 6-month period.

Injection site

It is injected in the thigh muscles: vastus lateralis or the rectus femoris.



When is it given?

Infants should get their first dose of hepatitis B vaccine at birth (**within 24 hours after birth**) and will usually complete the series at 6 months of age.

At birth

Prevention of perinatal HBV transmission

At the age of 2 months

At the age of 4 months

At the age of 6 months

S/E

- Local pain (3-29/100)
- Myalgia
- Transient fever (mostly within 24hrs)
- Swelling
- Erythema
- Headache

Severe reaction: anaphylaxis (1.1/1000000)

Rotavirus

Dana Fawzi

Epidemiology:

- Affect all age groups.
- Symptomatic infection → 6 -24 months. Neonate mostly
- If more than 24 month or he is an adult it will be a symptomatic.
- Peak in Winter
- it's live attenuated vaccine (LAV)

Route of transmission:

The virus spreads by the fecal-oral route; this means the virus is shed by an infected person and then enters a susceptible person's mouth to cause infection. Rotavirus can be spread by contaminated

- Hands
- Objects (toys, surfaces)
- Food
- Water

Symptoms:

• severe watery diarrhea, often with vomiting (can last for 3-8 days) • fever • and abdominal pain • loss of appetite and • dehydration • Dry, cool skin • Extreme thirst • Sunken eyes or sunken soft spot on top of the head.

Management

1- Treatment:

-self limiting -rehydration

2- Vaccination:

Two rotavirus vaccines are currently licensed for use in infants in the United States:

- RotaTeq (RV5) is given in 3 doses at ages 2 months, 4 months, and 6 months
- Rotarix (RV1) is given in 2 doses at ages 2 months and 4 months

Both vaccines are given by mouth (orally), not by a shot. children should receive all doses of rotavirus vaccine before they turn 8 months old

Some babies should not get this vaccine:

- A baby who has had a life-threatening allergic reaction to a dose of rotavirus vaccine
- Babies with "severe combined immunodeficiency" (SCID)
- Babies who are mildly ill can get the vaccine
- .Babies who are moderately or severely ill should wait until they recover.

Risks of a vaccine reaction:

Babies might become irritable, or have mild, temporary diarrhea or vomiting after getting a dose of rotavirus vaccine.

DTaP vaccine



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Haifa almohsen

DTaP vaccine

DTaP stand for:

-D- Diphtheria

-T- Tetanus.

-P- pertussis.



They are life threatening disease that is way there is vaccine against them !

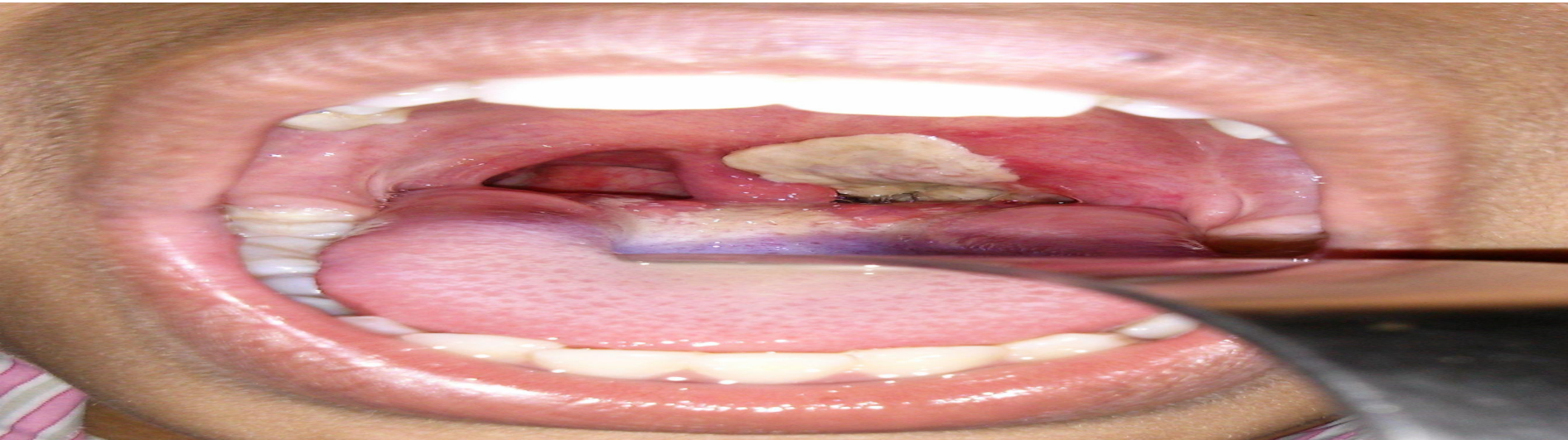


Diphtheria

-infection

-caused by corynebacterium Diphtheria

-symptom: grey or white patch in throat which may block airway.



Tetanus:

-infection

-caused by clostridium tetani >>enter to the body by a wound.

-characterized by muscle spasms>>spasm begins in the jaw to rest of the body.



Tetanus in its severest form

Pertussis:

-caused by bordetella pertussis.

-known as whooping cough because the cough is characterized by high pitched whoop sound.



Type of vaccine:

Inactivated toxoid .

What are other type of vaccine?

DIPHTHERIA TOXOID



Diphtheria Toxoid

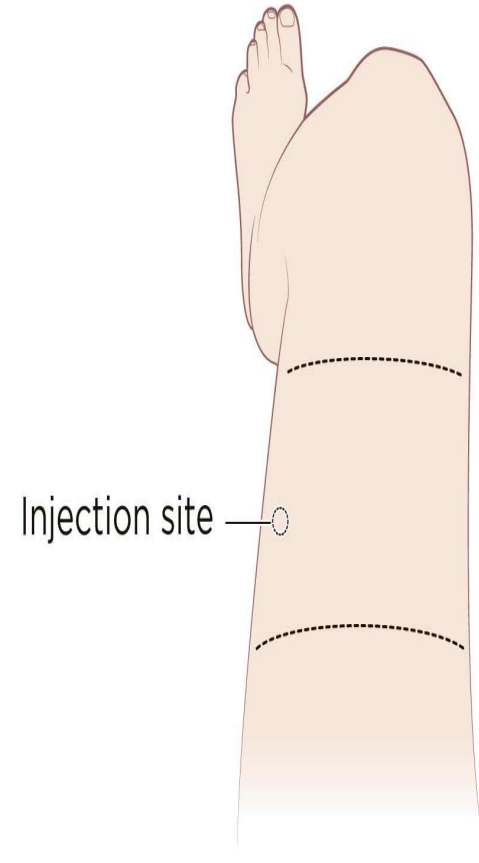


"Reaction" Test

Vastus lateralis

Route of administration:

- intramuscular injection
- left or right thigh
- middle third of vastus lateralis muscle.



Vaccination dose:

0.5 ml



Vaccine time:

-befor 7 years old children



doses time:

1- First dose at 2 Month

2- at 4 M.

3- at 6 M.

4- (15-18 M).

5-(4-6 years).



DTaP vaccine will save:

-children

-mother

- community



**HAPPY
SOCIETY**

Haemophilus influenzae type B vaccine

Kowthar Almousa

- **Haemophilus influenzae disease** is caused by the bacterium Haemophilus influenzae. There are six types of H. influenzae (a through f), and the most common one is H. influenzae type b.

- **Mode of transmission:** person-to-person through respiratory droplets.

- **Incubation period:** not specific, maybe few days.

- **Age group:** It usually affects children under 5 years old, or Adults 65 years or older.

- **Who should get the vaccine?**

1- Babies starting at 2 months old.

2- People at increased risk for getting invasive Hib disease, for example: (HIV, SCD, Asplenia).

3- Unimmunized older children and teens.

- **What it prevents?** Meningitis, pneumonia, and epiglottitis.

- **Types:** Hib-only Vaccines, or Combination Vaccines.

- **How many doses?**

- First Dose: 2 months of age.
- Second Dose: 4 months of age.
- Third Dose: 6 months of age.
- Final/Booster Dose: 12-15 months of age.
- **Route of administration:** Intramuscular.

- **Side effects:** pain at the site of injection, fever and there is no clear association with severe allergic reactions.

- **Who should not take the vaccine?**

- Infants younger than 6 weeks of age.
- Allergic reaction after a previous dose of Hib vaccine.
- Moderately or severely ill patients should probably wait until they recover.
- **Recommendations:** The CDC and WHO currently recommend that all infants be vaccinated.

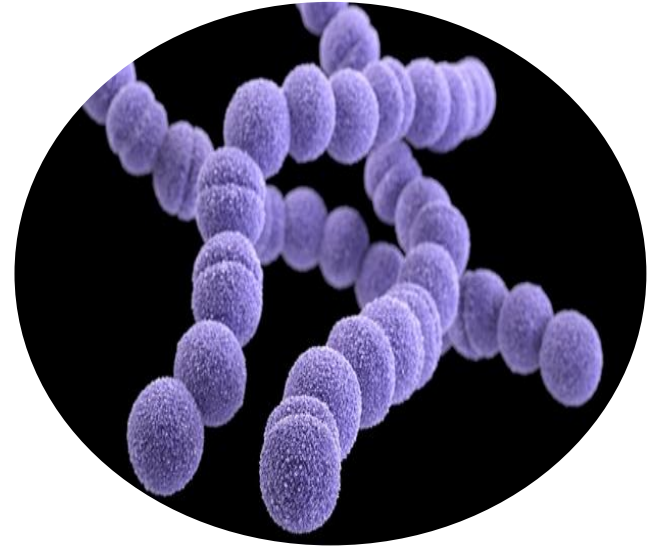
Pneumococcal Conjugate Vaccine (PCV)

Mai Alageel

why should we get vaccinated ?

Pneumococcal bacteria spread from person-to-person by direct contact with respiratory secretions, like saliva or mucus. It may cause infection to the :

- ◆ Ears.
- ◆ Lungs (pneumonia). most common among adults.
- ◆ Blood (bacteremia).
- ◆ meninges (meningitis). cause deafness and brain damage , it kills about 1 child in 10 who get it.



Pneumococcal Conjugate Vaccine (PCV)

Epidemiology :

Before there was a vaccine, the United States saw:

- more than 700 cases of meningitis.
- about 13,000 blood infections.
- about 5 million ear infections.
- about 200 deaths in children under 5 each year from pneumococcal disease.

Since vaccine became available, severe pneumococcal disease in these children has fallen by 88%.

PCV

- ◆ Inactivated “ killed “ vaccine .
- ◆ protects against 13 types of Streptococcus pneumoniae bacteria “ pneumococcus bacteria “
- ◆ routinely given to children at **2, 4, 6**, and **12** months of age .
- ◆ Treatment of pneumococcal infections with penicillin and other drugs is not as effective as it used to be , **why ?**

Who needs the vaccine ?

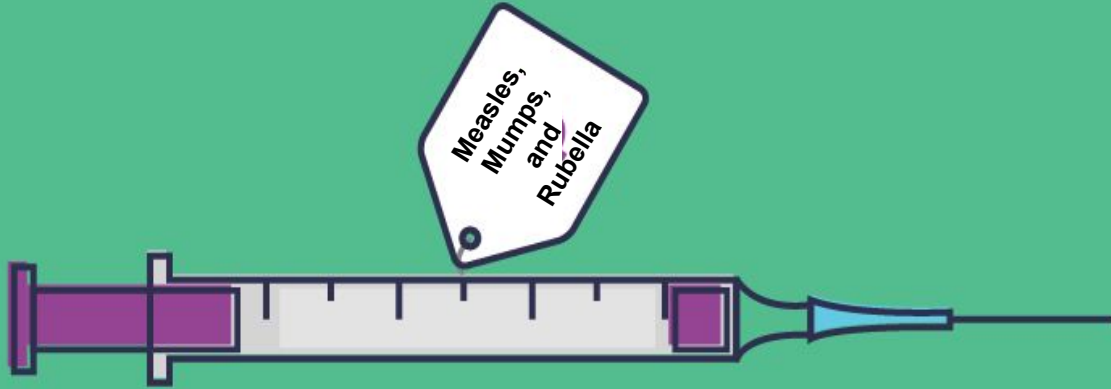
- Children under 2 years of age
- Adults 65 years and older
- Some adults 19 through 64 years old with certain medical conditions including those:
 - Patients With chronic illnesses (chronic heart, liver, kidney, or lung , diabetes)
 - Or conditions weaken the immune system (HIV/AIDS, cancer, or damaged/absent spleen)
 - Patients With cochlear implants or cerebrospinal fluid (CSF) leaks.
 - cigarettes smokers.
 - Alcoholic .

Who should not get this vaccine ?

Anyone who has ever had a life-threatening allergic reaction to a dose of this vaccine, to an earlier pneumococcal vaccine called PCV7, or to any vaccine containing diphtheria toxoid (for example, DTaP),

Most common vaccine reaction :

- Drowsiness
- loss of appetite (temporarily)
- redness or tenderness where the shot was given.
- Fever
- Irritable



MMR VACCINE

Futoon Alnemari.

Why get vaccinated?

Measles, mumps, and rubella are serious diseases. Before vaccines they were very common, especially among children.

These diseases spread from person to person through the air. You can easily catch them by being around someone who is already infected.

Measles:

- **Causes** rash, cough, runny nose, eye irritation, fever.
- **Complications** can lead to ear infection, diarrhea, pneumonia, seizures, brain damage, and death.

Mumps:

- **causes** fever, headache, swollen glands.
- **Complications** :Can lead to deafness, meningitis, infection of the pancreas, painful swelling of the testicles or ovaries, and, rarely, death.

Rubella: (German Measles)

- **causes** rash and mild fever; and can cause arthritis, (mostly in women).
- If a woman gets rubella while she is pregnant, she could have a miscarriage or her baby could be born with serious birth defects.

You can protect children against these serious diseases with safe, effective vaccination.



MMR VACCINE

Type of Vaccine:

Live attenuated
Viruses of the 3
diseases.

administered by;
the **subcutaneous** route.

Who Should Get MMR Vaccine?

Children: No. of doses: 2 (0.5ml)

(The maximum age MMRV for administration is 12 years of age.)

Two doses of MMR vaccine are recommended:

The **first dose** at
12 through 15
months of age

The **second dose** at **4 through 6**
years of age (may be given earlier, if
at least 28 days after the 1st dose)



MMR VACCINE

MMR Vaccine Side Effects:

- The MMR vaccine is **very safe**, effective and most side effects are **mild** and **short-lived**.
- Most people who get MMR vaccine do not have any serious problems with it.
- There's less chance of side effects after the second dose of MMR than the first.

Common side effects:

- (About a week to 11 days after) some children get a very mild form of [measles](#). The symptoms last for about two or three days.
- (About three to four weeks after) one in 50 children develop a mild form of [mumps](#). The symptoms lasts for a day or two.

Rare side effects:

Bruise-like spots

about two weeks after having the MMR vaccine.
Is linked to the [rubella](#) vaccine and is known as (ITP).

Seizures (fits)

six to 11 days after having the MMR vaccine.



MMR VACCINE

Pre-school vaccinations:

Meningococcal Vaccine (MCV4)

Sara AlQahtani - 434200822

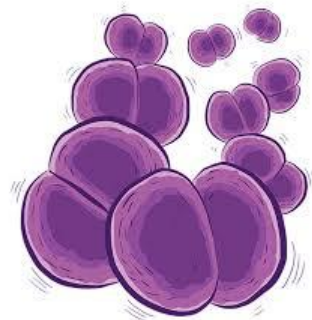


Why?

To Prevent meningococcal disease which presents clinically as meningitis (about 50% of cases), bacteremia (38% of cases), or bacteremic pneumonia (9% of cases).

It is a bacterial infection caused by ***Neisseria meningitidis***.

Meningococcal disease is **common** in Africa and in Saudi Arabia



Meningococcal Conjugate Vaccine (MCV4)

Type: Polysaccharide

ROA: intramuscular

No. of doses: 2 (0.5ml)

Schedule:

1st dose: at age of 9 months.

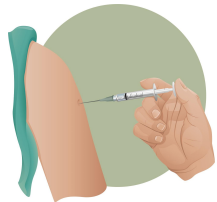
2nd dose: at age of 12 months.

Side Effects:

- Injection site pain
- Swelling or redness
- Malaise
- Headache
- Fever.
- Serious allergic reaction, are very rare.

Contraindications:

- People who have had a serious allergic reaction to a previous dose of either meningococcal vaccine or to one of the vaccine components. The packaging of some meningococcal vaccines may contain latex. Information on the contents of each vaccine is included with each vaccine.
- People who are moderately or severely ill.



The MCV4 vaccines **do not** protect against MenB.⁷



MenB accounts for approximately

50%

of all meningococcal disease cases in persons 17 to 23 years of age in the US²

An additional vaccine is needed to help protect against MenB^{7,8}



Pre-school vaccinations:

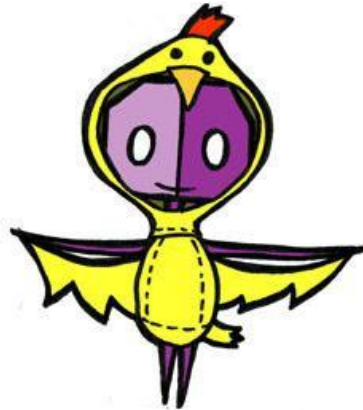
Varicella Vaccine

Sara AlQahtani - 434200822



Why?

Protect against **chickenpox** caused by the **varicella zoster virus (VZV)**.



VARICELLA-ZOSTER
VIRUS

Varicella Vaccine

Type: Live attenuated vaccine

ROA: Subcutaneous

No. of doses: 2 (0.05 ml)

Schedule:

1st dose: at age of 18 months.

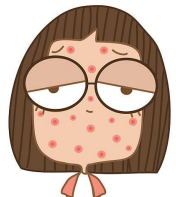
2nd dose: at first year of school (4-6 years old).

Side Effects:

- Soreness.
- Redness at site of injection
- Mild rash
- Serious allergic reaction (anaphylaxis), are rare.

Contraindications:

- History of a serious reaction (e.g., anaphylaxis)
- Pregnant now or may become pregnant within 1 month
- Having any malignant condition affecting the bone marrow or lymphatic system
- Receiving high-dose systemic immunosuppressive therapy
- Family history of congenital or hereditary immunodeficiency in first-degree relatives



MEASLES VACCINE

Suha Alenazi



Measles :

Measles is a highly contagious viral disease. It remains an important cause of death among young children globally, despite the availability of a safe and effective vaccine. Measles is one of the most infectious diseases known to humankind and an important cause of death and disability among children worldwide. Those unvaccinated against the disease are at risk of severe health complications such as pneumonia, diarrhoea, and encephalitis (a dangerous infection of the brain causing inflammation) and blindness. The disease can be fatal.

symptômes :

is transmitted via droplets from the nose, mouth or throat of infected persons.

Initial symptoms, which usually appear 10–12 days after infection:

- High fever**
- Runny nose**
- Bloodshot eyes**
- White spots on the inside of the mouth.**
- Rash : starting on the face and upper neck and gradually spreading downwards.**

Measles vaccine

Type : it is life attenuated vaccine The vaccine is available both by itself and in combination with other vaccines. This includes with the rubella vaccine and mumps vaccine to make the **MMR** vaccine.

Route of administration and schedule of measles vaccine:

It given **I.M.**

WHO recommends two doses of vaccine for all children. In countries with **high risk** of disease the first dose should be given around **nine months of age**. Otherwise in **low risk** countries it can be given at **twelve months** of age. The **second dose** should be given at least one month after the first dose. This is often done at age 15 to 18 months.

In KSA:

- we give measles vaccine alone at the age of 9months.
- we give it in combination MMR at the age of 12,18 months and first class primary school age.

Why we use measles vaccine ?

The benefit of measles vaccination in preventing illness, disability, and death has been well documented. The first 20 years of licensed measles vaccination in the U.S. prevented an estimated 52 million cases of the disease, 17,400 cases of **mental retardation**, and 5,200 **deaths**.

Adverse effects:

- fever .
- Injection site pain.
- Red or purple discolorations on the skin known as thrombocytopenic purpura.
- seizures related to fever (**febrile seizure**).

Contraindications:

- Pregnancy.
- HIV-infected children (may receive the vaccine if their CD4+ lymphocyte count is greater than 15%).
- Anaphylaxis after previous dose or severe allergy to vaccine component.
- severe allergy to gelatin.

POLIO -VACCINE-

WHAT YOU NEED TO KNOW !!

*Wadha AlOtaibi
435200027*

WHY GET VACCINATED?

Vaccination can protect people from *polio* or poliomyelitis. Polio is a disease caused by a virus. It is spread mainly by person- to-person contact. It can also be spread by consuming food or drinks that are contaminated with the feces of an infected person.

Most people infected with polio have *no symptoms*, and many recover without complications. But *sometimes* people who get polio develop *paralysis* (cannot move their arms or legs). Polio can result in permanent disability. Polio can also *cause death*, usually by *paralyzing the muscles used for breathing*.

POLIO
-VACCINE-

WHAT ARE THE TYPES AND DOSES OF POLIO VACCINE?

There are two types:

- one that uses inactivated poliovirus and is given by injection (IPV).
- the one that uses live attenuated poliovirus and is given by mouth (OPV).

Children

Most people should get IPV when they are children. Doses of IPV are usually given at 2, 4, 6 to 18 months, and 4 to 6 years of age.



WHAT ARE THE TYPES AND DOSES OF POLIO VACCINE?

Adults

Most adults do not need IPV because they were already vaccinated against polio as children. But some adults are at higher risk and should consider polio vaccination, including:

- people traveling to certain parts of the world,
- laboratory workers who might handle polio virus.
- health care workers treating patients who could have polio.

These higher-risk adults may need 1 to 3 doses of IPV.



WHO SHOULD NOT GET THIS VACCINE ?

1- If the person getting the vaccine has any severe, life-threatening allergies.

If someone ever had a life-threatening allergic reaction after a dose of IPV, or have a severe allergy to any part of this vaccine, she/he may be advised not to get vaccinated.

2- if the person getting the vaccine is not feeling well.

If someone have a mild illness, such as a cold, she/he can probably get the vaccine today. If she/he is moderately or severely ill, she/he should probably wait until recovery.

POLIO
-VACCINE-

RISKS OF VACCINE REACTION !!

With any medicine, including vaccines, there is a chance of side effects. These are usually mild and go away on their own, but serious reactions are also possible.

Some people who get IPV get a sore spot where the shot was given. IPV has not been known to cause serious problems, and most people do not have any problems with it.

POLIO
-VACCINE-

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1-pupmed:

<https://www.webmd.com/children/vaccines/dtap-and-tdap-vaccines>

2- centers of disease control and prevention

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<https://www.cdc.gov/vaccines/hcp/vis/vis-statements/ipv.pdf>

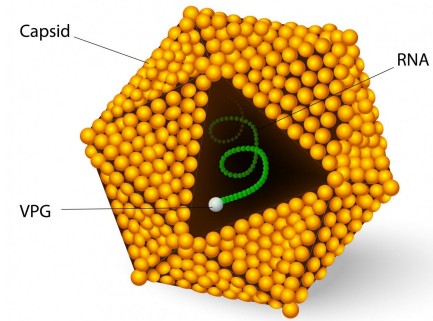
<https://www.cdc.gov/polio/about/index.htm>

Hepatitis A

Nouf Alabdulkarim

- **Causative Agent:**
 - Hepatitis A Virus.
- **Route of transmission:**
 - contact with the feces of infected people.
 - food, water, or objects contaminated with HAV.
- **Symptoms:**
 - fever, fatigue, loss of appetite, nausea, vomiting, and/or joint pain
 - severe stomach pains and diarrhea.
 - jaundice.
- **Prognosis:**
 - Mostly full recovery with lifelong immunity.
 - Some die from fulminant hepatitis.
- **Risk:**
 - associated with a lack of safe water, and poor sanitation and hygiene.

Hepatitis A virus



Hepatitis A Vaccine



- **Type:**
 - Killed/Inactivated.
- **Routes of administration:**
 - Intramuscular.
- **Target group:**
 - (WHO) recommends universal vaccination in areas where the diseases is moderately common.
 - The Center for Disease Control and Prevention (CDC) recommends vaccinating adults who are at high risk and all children.
- **Age Group:**
 - recommended for all children 12 to 23 months of age.
- **Doses:**
 - The initial dose of the vaccine at 18 months.
 - Should be followed up by a booster dose six to twelve months later. (at 24 months).

- **Effect:**

- Protection begins 2-4 weeks after the initial vaccination.
- 15-25 years

- **Side Effects:**

- soreness or redness where the shot was given.
- low-grade fever
- headache
- tiredness

Other possible side effects:

- Fainting.
- Shoulder pain.
- Allergic reaction.

- **Trade names:**

- Biovac A
- Harvix.

- **Combination vaccines:**

- Twinrix is a vaccine against hepatitis A and hepatitis B.
- Vivaxim is a vaccine against hepatitis A and typhoid.

References



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- https://www.vaccines.gov/diseases/hepatitis_a/index.html
- <https://www.moh.gov.sa/HealthAwareness/EducationalContent/HealthInstructions/Documents/%D8%AC%D8%AF%D9%88%D9%84%20%D8%A7%D9%84%D8%AA%D8%B7%D8%B9%D9%8A%D9%85%D8%A7%D8%AA.pdf>
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<https://www.cdc.gov/vaccines/vpd/mmr/public/index.html>

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<http://www.nhs.uk/Conditions/vaccinations/Pages/mmr-side-effects.aspx>

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