



Pre-school Vaccination Schedule in Saudi Arabia

October 18th, 2017

Supervisor Dr. Salwa Tayel

| Name | Student ID | Vaccine |
|-------------------|------------|------------------|
| Dana Fawzi | 435200011 | Rotavirus |
| Futoon AlNemari | 434201281 | MMR |
| Haifa AlMohsen | 434200986 | DTaP |
| Kowthar AlMousa | 433200201 | Hib |
| Mai AlAgeel | 435200049 | PCV |
| Nouf AlAbdulkarim | 435200003 | Hepatitis A |
| Nouf AlTwaijri | 435200009 | BCG |
| Reham AlObaidan | 434201288 | HBs |
| Sara AlQahtani | 434200822 | Varicella & MCV4 |
| Suha AlEnazi | 435200025 | Measles |
| Wadha AlOtaibi | 435200027 | IPV & OPV |

Report Edited by: Sara AlQahtani

Table of contents

| | |
|--|-----------|
| Pre-School Vaccination Schedule By Ministry Of Health In Saudi Arabia | 2 |
| BCG Vaccine | 3 |
| Hepatitis B Vaccine | 4 |
| Polio vaccine (IPV & OPV) | 5 |
| DTaP Vaccine | 6 |
| Hib Vaccine | 6 |
| PCV | 7 |
| Rotavirus Vaccine | 8 |
| Measles Vaccine | 9 |
| Varicella Vaccine | 10 |
| MMR Vaccine | 11 |
| Hepatitis A | 12 |
| MCV4 | 13 |
| Summary | 14 |
| References | 16 |

Pre-School Vaccination Schedule By Ministry Of Health In Saudi Arabia



وزارة الصحة
Ministry of Health

Kingdom of Saudi Arabia



وزارة الصحة
Ministry of Health

المملكة العربية السعودية

شهادة تطعيم
Vaccination Certificate





| التطعيم Vaccine | التاريخ Date | الختم Stamp | الأسم والتوقيع Name & Signature |
|--------------------|-----------------|----------------|------------------------------------|
| | | | |
| | | | |
| | | | |
| | | | |

رسالة

عزيزي الأب، عزيزتي الأم ...

الهدف من التطعيمات الواردة في هذه الشهادة:

- حماية الأطفال بالمملكة وفئات المجتمع من الأمراض المستهدفة بالتحصين.
- الحفاظ على خلو المملكة من شلل الأطفال.
- الحفاظ على خلو المملكة من الكزاز الوليدي.
- إزالة أمراض الحصبة، الحصبة الألمانية، النكاف.
- خفض معدلات باقي الأمراض المستهدفة بالتحصين.

التزامكم باحضار أطفالكم لأخذ التطعيم سواء بالجرعات الأساسية أو المتشطة هو وقاية لهم بأذن الله من العديد من الأمراض ومضاعفاتها الخطيرة.

حرصكم على التعاون مع فرق وزارة الصحة ومراكزها الصحية أثناء حملات التطعيم هو الأساس للوصول إلى أهدافنا الوقائية المتمثلة في وطن خال من الأمراض المستهدفة بالتحصين.

| National Immunization Schedule | | جدول التطعيمات الوطني | | |
|--|----------------|------------------------------------|-----------------|---|
| تاريخ الزيارة التالية Next Visit Date | الختم Stamp | الأسم والتوقيع Name & Signature | التاريخ Date | التطعيم Vaccine |
| | | | | BCG عند الولادة At Birth - التهاب كبدى (ب) - شلل الأطفال معطل - الثلاثى البكتيري |
| | | | | DTaP عمر شهرين 2 months - التهاب الكبدى (ب) - السنتيمية الثلاثية - Pneumococcal Conjugate (PCV) - فيروس الروتا** |
| | | | | IPV عمر 4 شهور 4 months - شلل الأطفال معطل - DTaP - التهاب الكبدى (ب) - السنتيمية الثلاثية - Pneumococcal Conjugate (PCV) - فيروس الروتا** |
| | | | | OPV عمر 6 شهور 6 months - شلل الأطفال المعوي - شلل الأطفال معطل - DTaP - التهاب الكبدى (ب) - السنتيمية الثلاثية - Pneumococcal Conjugate (PCV) - الفيروس القهقري |
| | | | | MMR عمر 9 شهور 9 months - الحصبة القهقري - الحصبة الثلاثية - Measles - الحصبة الثلاثية - Measles - الحصبة الثلاثية - Measles |
| | | | | MMR عمر 12 شهر 12 months - الحصبة الثلاثية - الحصبة الثلاثية - Measles - الحصبة الثلاثية - Measles |
| | | | | OPV عمر 18 شهر 18 months - شلل الأطفال المعوي - DTaP - السنتيمية الثلاثية - MMR - الحصبة الثلاثية - Hepatitis A |
| | | | | Hepatitis A عمر 24 شهر 24 months - التهاب الكبدى (أ) - التهاب الكبدى (أ) |

مع تطعيمات وكالة الصحة العامة - برنامج التحصين الموحد

* Pneumococcal Conjugate (PCV13)
** Measles-Rubella vaccine
*** (TD) (at least three 7 years of age)

* التطعيم الثلاثى العنقودية العنقودية (PCV13)
** التطعيم الثلاثى العنقودية العنقودية (MMR)
*** يعطى التطعيم الثلاثى العنقودية العنقودية (MMR) من سن 7 سنوات

**المملكة العربية السعودية
وزارة الصحة**

مديرية الشؤون الصحية بمنطقة _____
بمحافظة _____

شهادة تطعيم

Health Center / Hospital: _____ مركز صحي / مستشفى

Name: _____ الإسم

Date of Birth: ____ / ____ / ____ تاريخ الميلاد / هـ الموافق

Family / Medical File No.: _____ رقم السجل العائلي / رقم السجل الطبي

Child ID / Iqama Number: _____ رقم السجل المدني للطفل (إن وجد) / رقم الإقامة

No. In Immunization Registry: _____ رقم القيد بسجل التطعيم

Full Address: _____ العنوان كاملاً

Tel. Home: _____ هاتف المنزل

Mobile: _____ رقم الجوال

BCG Vaccine

Name: Bacille Calmette-Guerin (BCG)

Type: Live attenuated vaccine.

Prevents: Tuberculosis*.

Route of administration: An intradermal injection in the upper arm.

No. of doses: 1

When (doses):

- Given for children who have an increased risk of acquiring tuberculosis soon after birth (eg. living in areas where TB rates are high).
- It is also given to people from ages 16-35 who are at risk of TB because of their work, eg. healthcare workers.
- Never given to people over the age of 35 because it doesn't work very well in adults.

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:
 - BCG should not be given to persons who are immunosuppressed (e.g., HIV positive) or who are likely to become immunocompromised (e.g., persons who are candidates for organ transplant).
- Pregnancy.

*It offers great protection against meningitis TB, but weak protection against respiratory TB (which is the common type in adults).

Hepatitis B Vaccine

Name: Hepatitis B vaccine

Type: Inactivated subunit vaccine

Prevents: Hepatitis B infection

Route of administration: Intramuscularly

No. of doses: 3 or 4 shots over a 6-month period.

When:

- At birth (within 24 hours after birth) "Prevention of perinatal HBV transmission"
- At the age of 2 months
- At the age of 4 months
- At the age of 6 months

Side effects:

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

Polio vaccine (IPV & OPV)

Name: Polio vaccine (IPV & OPV)

Type:

- IPV: inactivated poliovirus
- OPV: live attenuated poliovirus

Prevents: poliomyelitis

Route of administration:

- IPV: Intramuscular Injection
- OPV: Oral

No. of doses:

- Children: 5 doses of IPV
- Adults at risk: 1 to 3 doses of IPV.

When:

- At birth (within 24 hours after birth) "Prevention of perinatal HBV transmission"
- At the age of 2 months
- At the age of 4 months
- At the age of 6 months

Side effects:

- Sore spots
- Severe reaction.

Contraindications:

- If the person getting the vaccine has any severe, life-threatening allergies.
- If the person getting the vaccine is not feeling well.

DTaP Vaccine

Name: Diphtheria - Tetanus - Pertussis vaccine.

Type: inactivated formed of toxin produced by bacteria which cause the three diseases

Prevents: Diphtheria - Tetanus - Pertussis

Route of administration: Intramuscular Injection

No. of doses: 5 doses before age of 7.

When:

- At 2 months of age
- At 4 months of age
- At 6 months of age
- At 15 to 18 months of age
- At 4 to 6 years of age

Contraindications:

- Children who are moderately or severely ill at the time they are scheduled to receive the vaccine should wait until they recover before getting it.

Hib Vaccine

Name: Haemophilus influenzae type b vaccine.

Type: Conjugate* vaccine

Prevents: Meningitis, pneumonia, and epiglottitis

Route of administration: Intramuscular Injection

No. of doses: 3 doses

When:

- 1st dose: 2 months of age.
- 2nd dose: 4 months of age.
- 3rd dose: 6 months of age.
- Final/Booster Dose (only in US): 12-15 months of age.

Side effects:

- Pain at the site of injection
- Fever
- No clear association with severe allergic reactions.

Contraindications:

- 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.

*Created by covalently attaching a poor antigen to a strong antigen thereby eliciting a stronger immunological response to the poor antigen. Most commonly, the poor antigen is a polysaccharide that is attached to strong protein antigen.

PCV

Name: Pneumococcal conjugate vaccine.

Type: Inactivated “killed” vaccine.

Prevents/Protect: against 13 types of Streptococcus pneumoniae bacteria

Route of administration: Intramuscular Injection

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)
 - Conditions weaken the immune system (HIV/AIDS, cancer, or damaged/absent spleen)
 - Patients With cochlear implants or cerebrospinal fluid (CSF) leaks.
- Cigarettes smokers & Alcoholics.

No. of doses: Children: 4 doses

When:

- 1st dose: 2 months of age.
- 2nd dose: 4 months of age.
- 3rd dose: 6 months of age.
- 4th dose: 12 months of age.

Side effects:

- Drowsiness
- loss of appetite (temporarily)
- redness or tenderness where the shot was given.
- Fever
- Irritable streptococcus pneumoniae bacteria “ Pneumococcal bacteria”
- 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.

Contraindications:

- life-threatening allergic reaction to a previous dose of this vaccine PCV7 or to any vaccine containing diphtheria toxoid (for example, DTaP)
- **Safe** for **Pregnant** ladies because it's **killed** bacteria

Rotavirus Vaccine

Name: Rotavirus vaccine.

Type: live attenuated vaccine (LAV)

- RotaTeq (RV5)
- Rotarix (RV1)

Prevents: Rotavirus infections

Route of administration: Oral

No. of doses:

- RotaTeq (RV5): 3 doses before the age of 8 months old.
- Rotarix (RV1): 2 doses before the age of 8 months old.

When:

RotaTeq (RV5):

- 1st dose: 2 months of age.
- 2nd dose: 4 months of age.
- 3rd dose: 6 months of age.

Rotarix (RV1):

- 1st dose: 2 months of age.
- 2nd dose: 4 months of age.

Side effects:

- Irritable
- Mild, temporary diarrhea or vomiting.

Contraindications:

- 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 moderately or severely ill should wait until they recover.

Measles Vaccine

Name: Measles vaccine.

Type: live attenuated vaccine

Prevents: Measles

Route of administration: subcutaneous Injection

No. of doses: Internationally 2 doses, in KSA 1 dose.

When:

High risk countries:

- 1st dose: 9 months of age.
- 2nd dose: 10 months of age.

Low risk countries:

- 1st dose: 12 months of age.
- 2nd dose: 15 - 18 months of age.

In KSA:

- 1st dose: measles vaccine alone at the age of 9 months.
- 2nd dose: combination MMR at the age of 12,18 months
- 3rd dose: combination MMR at First class primary school age.

Side 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.

Varicella Vaccine

Name: Varicella Vaccine.

Type: Live attenuated vaccine

Prevents: chickenpox caused by the varicella zoster virus (VZV).

Route of administration: subcutaneous Injection

No. of doses: 2 doses

When:

- 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

MMR Vaccine

Name: Measles - Mumps - Rubella vaccine.

Type: Live attenuated vaccine

Prevents: Measles, mumps, and rubella

Route of administration: Subcutaneous Injection

No. of doses: 2 doses

When:

- 1st dose: 12-15 months of age.
- 2nd dose: first year of school (4-6 years old). (may be given earlier, if at least 28 days after the 1st dose)

Side effects:

- Fever
- Rash
- Swollen glands
- Seizure
- Joint pain/stiffness
- Low platelet count/bleeding
- Encephalitis

Contraindications:

- Have a severe allergic reaction following the first MMR shot.
- Have allergic to gelatin or neomycin.
- Pregnant or are planning to become pregnant in the next 4 weeks. (The vaccine is safe if you are breastfeeding.)
- If immune system is weak because of cancer drugs, corticosteroids, or AIDS.

Hepatitis A

Name: Hepatitis A vaccine.

Type: Killed/Inactivated vaccine

Prevents: Hepatitis A Virus infection

Route of administration: Intramuscular Injection

No. of doses: 2 doses

When:

- 1st dose: 18 months of age.
- Final/Booster Dose: 24 months of age. (six to twelve months later)

Side effects:

- soreness or redness where the shot was given.
- low-grade fever
- Headache.
- Tiredness
- Fainting.
- Shoulder pain.
- Allergic reaction.

MCV4

Name: Meningococcal Conjugate Vaccine.

Type: Conjugate vaccine

Prevents: Meningococcal disease (meningitis, bacteremia, or bacteremic pneumonia) caused by *Neisseria meningitidis* serogroups (A,C,Y,W)

Route of administration: Intramuscular Injection

No. of doses: 2 doses

When:

- 1st dose: 9 months of age.
- 2nd dose: 12 months of age.

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 US⁸

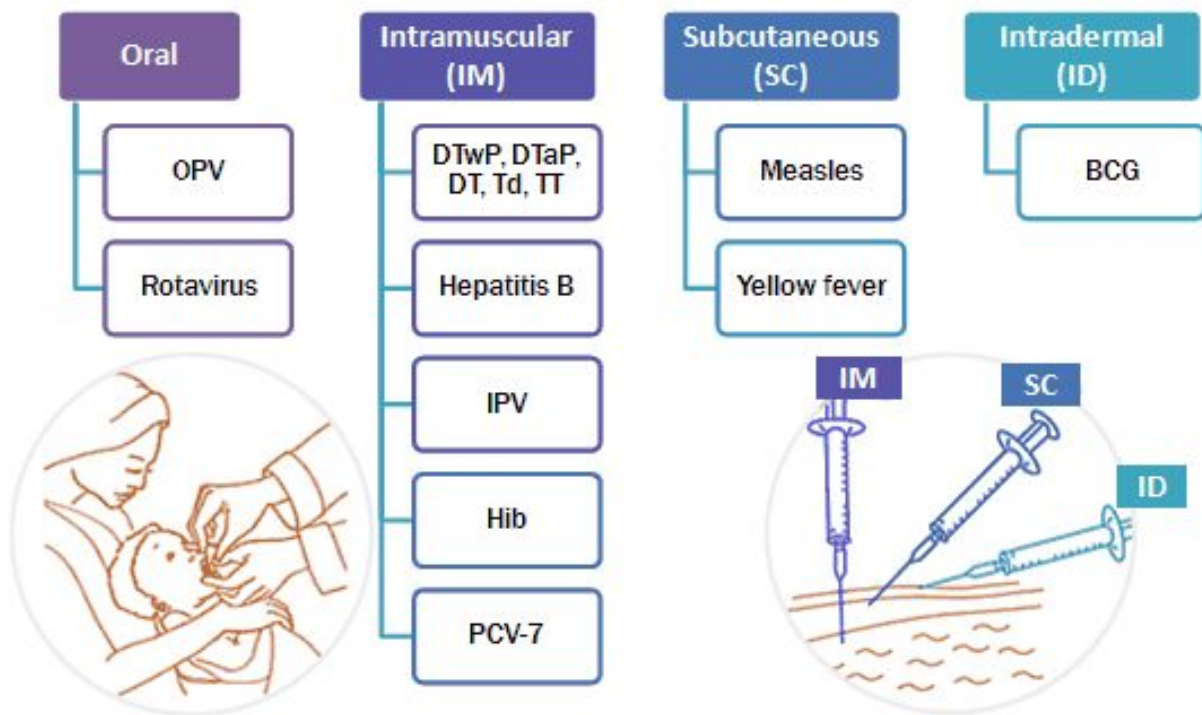
An additional vaccine is needed to help protect against MenB⁹



Summary

| Name | Type | ROA | No. of doses | Time | Prevent |
|--------------------------|------------------------------|---------------|-----------------------------|--|---|
| BCG | Live attenuated | Intradermal | 1 | At birth | Tuberculosis |
| Hepatitis B | Inactivated subunit | Intramuscular | 4 | At birth 2 months 4 months 6 months | Hepatitis B infection |
| IPV | inactivated poliovirus | Intramuscular | Children 5 Adults 1-3 | Children (IPV): 2 months 4 months 6 months 18 months 4 to 6 years | poliomyelitis |
| OPV | live attenuated poliovirus | Oral | | | |
| DTaP | inactivated toxoid vaccine | intramuscular | 5 | 2 months 4 months 6 months 18 months 4 to 6 years | -Diphtheria. -Tetanus . -pertussis. |
| Hib | Conjugate vaccine | Intramuscular | 3 | 2 months 4 months 6 months 12-15 months. | Meningitis pneumonia epiglottitis |
| PCV | Inactivated "killed" vaccine | Intramuscular | 4 | 2 months 4 months 6 months 12 months. | Against Streptococcus pneumoniae bacteria infection |
| Rotavirus Vaccine | live attenuated vaccine | Oral | (RV5): 3 (RV1): 2 | 2 months 4 months 6 months | Rotavirus infections |
| Measles Vaccine | live attenuated | subcutaneous | World: 2 KSA: 1 then MMR | 1st: 9- 12 months 2nd: 12-18 months | Measles |

| | | | | | |
|----------------------------|----------------------------|---------------|---|------------------------------|--------------------------------|
| Varicella Vaccine | Live attenuated | subcutaneous | 2 | 18 months 4 to 6 years | Chickenpox |
| MMR | Live attenuated | subcutaneous | 2 | 12-15 months 4 to 6 years | Measles mumps rubella |
| Hepatitis A Vaccine | Inactivated killed Vaccine | Intramuscular | 2 | 18 months 24 months | Hepatitis A Virus infection |
| MCV4 | Conjugate vaccine | Intramuscular | 2 | 9 months 12 months | Meningococcal disease |



References

- World Health Organization - Vaccine safety basics <http://vaccine-safety-training.org>
- Center for Disease Control and Prevention <https://www.cdc.gov>
- U.S. Department of Health & Human Services <https://www.hhs.gov>
- Ministry of Health in Saudi Arabia <https://www.moh.gov.sa/en/Pages/Default.aspx>
- National Health Service (NHS) - UK <https://www.nhs.uk/pages/home.aspx>

Links:

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

<https://www.cdc.gov/vaccines/hcp/vis/vis-statements/pcv13.html>

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

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

<http://www.who.int/mediacentre/factsheets/fs328/en/>

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>

<https://www.cdc.gov/vaccines/hcp/vis/vis-statements/hep-a.html>

<http://vaccine-safety-training.org/route-of-administration.html>

<https://www.cdc.gov/tb/topic/treatment/tbdisease.html>

<http://www.nhs.uk/Conditions/vaccinations/Pages/bcg-tuberculosis-TB-vaccine.aspx>

<https://www.cdc.gov/tb/publications/factsheets/prevention/bcg.htm>

<https://medlineplus.gov/druginfo/meds/a682809.html>

<https://www.cdc.gov/vaccines/vpd/mmr/hcp/administering-mmr.html>

<https://www.cdc.gov/vaccines/vpd/mmr/public/index.html>

<https://medlineplus.gov/druginfo/meds/a601176.html>

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

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

<https://www.webmd.com/children/vaccines/measles-mumps-and-rubella-mmr-vaccine#2>

<https://www.cdc.gov/vaccines/vpd/varicella/index.html>

<https://www.cdc.gov/vaccines/vpd/mening/index.html>