

Vaccine Administration

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Objective

- ▶ To administer vaccinations in accordance with NIAC Guidelines with respect to clients age, site of vaccination and needle size

<http://www.hse.ie/eng/health/Immunisation/hcpinfo/guidelines/>

Introduction

- ▶ Vaccine administration is one of the many roles of the Practice Nurses.



- ▶ Starting off can be a challenge

Types of Vaccine

- Primary Childhood Immunisation Schedule (PCIS)
- Travel Vaccinations
- Pregnancy Vaccines
- Seasonal Flu/Pneumococcal Vaccines
- At risk categories
- School Immunisations

For the purpose of this presentation I will focus on PCIS as this forms the largest section within the role of vaccination and also is more complex due to the age of patient.

Primary Childhood Immunisation Schedule

Babies born on or after 1 October 2016



Age	Vaccination
2 months	Visit 1 6 in 1+PCV+MenB+Rotavirus 3 Injections+Oral Drops
4 months	Visit 2 6 in 1+MenB+Rotavirus 2 Injections+Oral Drops
6 months	Visit 3 6 in 1+PCV+MenC 3 Injections
No Rotavirus vaccine on or after 8 months 0 days	
12 months	Visit 4 MMR+MenB 2 Injections
13 months	Visit 5 Hib/MenC+PCV 2 Injections

Remember to give your baby 3 doses of liquid infant paracetamol after the 2 and 4 month MenB vaccines.

1. Give 2.5 mls (60 mg) of liquid infant paracetamol at the time of the immunisation or shortly after.
2. Give a second dose of 2.5 mls (60 mg) 4 to 6 hours after the first dose.
3. Give a third dose of 2.5 mls (60 mg) 4 to 6 hours after the second dose.

 **Remember five visits**
to your GP (doctor) www.immunisation.ie



Education & Training

- ▶ Professional Registration NMBI
- ▶ Immunisation Study Day - Full Day at least once
- ▶ Immunisation updates - Half day two yearly min
- ▶ Basic Life Support - 2 yearly re-certification
- ▶ Anaphylaxis Training & Anaphylaxis Refresher
- ▶ Be familiar with :
 - ▶ Immunisation Guidelines for Ireland (www.immunisation.ie)
 - ▶ Summary of Product Characteristics (SmPCs) for each of the vaccines available at www.hpra.ie or www.medicines.ie

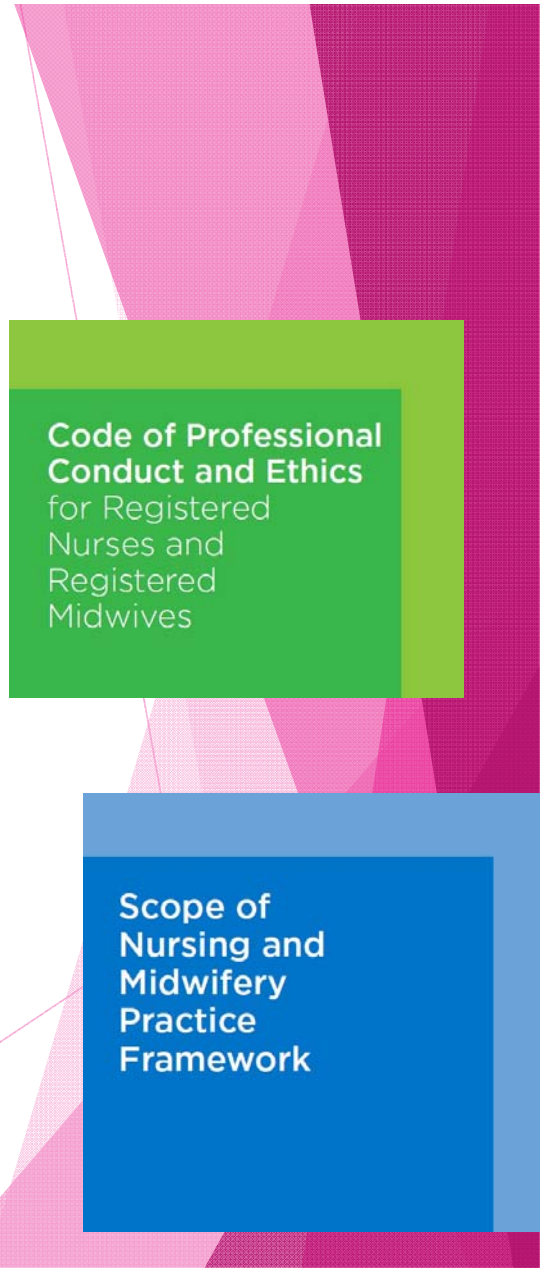
Depending on your clinical area the following guidelines are available

- ▶ Guidelines for Vaccinations in General Practice (HSE, 2018)
<https://www.hse.ie/eng/health/immunisation/infomaterials/pubs/guidelinesgp.pdf>
- ▶ Guidelines for Staff Schools Immunisation Programme (HSE, 2017)
<https://www.hse.ie/eng/health/immunisation/pubinfo/schoolprog/4in1mmr/schoolguidelines20172018.pdf>
- ▶ Seasonal Influenza Peer Vaccination Programme (HSE, 2018)
<https://www.hse.ie/eng/health/immunisation/hcpinfo/fluinfo/peerguidelines.pdf>

Professional Preparation

- ▶ Code - Set Standards
- ▶ Scope – determine competency

Each Practice Nurse must practice within his/her own Scope of Practice and must take measures to develop and maintain the competence necessary for professional practice. (Scope of Nursing and Midwifery Practice Framework & Code of Conduct, NMBI, 2015)

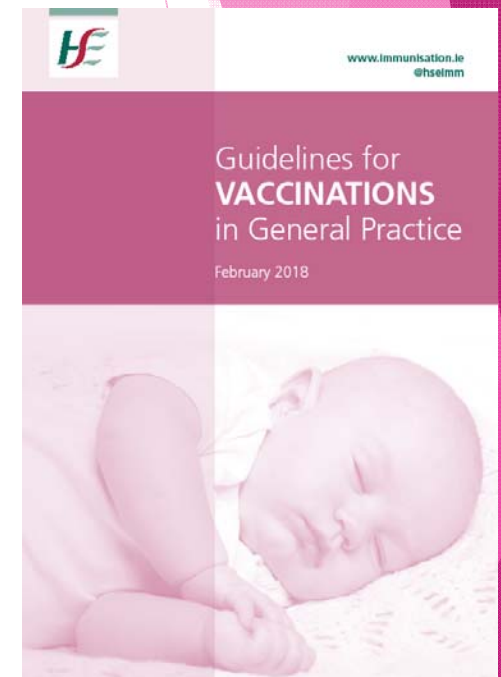


Code of Professional
Conduct and Ethics
for Registered
Nurses and
Registered
Midwives

Scope of
Nursing and
Midwifery
Practice
Framework

Competence

- ▶ Shadow an experience Vaccinator
- ▶ Supportive clinical learning environment
- ▶ Reflective practice – discuss with mentor



Prescription

Vaccines are a medication and therefore require a prescription.

Either of two methods can be used in practice:

Individual written prescription

Or

Medication protocol.

Individual Written Prescription

- ▶ Completed on each child's file at 6 week check by GP
- ▶ Can utilise template facility on computer system
- ▶ Prescriptions expire after 6 months
- ▶ System needed to identify patients to prescribe 12 and 13 month vaccines before attending for vaccination.

Medication Protocol

The Nursing and Midwifery Board defines medicine protocols as “written directions that allow for the supply and administration of a named medicinal product by a registered nurse or midwife in identified clinical situations”.

A medicine protocol involves the authorisation of the nurse/midwife to supply and administer a medicine to groups of patients in an defined situation meeting specific criteria and who may not be individually identified before presentation for treatment”.

HSELAND Resources

Medicines Management

Menu | Resources

hseland.ie
Cúram le Eolas



Medicines Management

This E-Learning programme has been designed to support you in the facilitation of safe and effective use of medicines in your day-to-day practice and has been developed by the HSE. Click **START** to begin.

Read the [Nursing and Midwifery Board of Ireland: Scope of Nursing and Midwifery Framework, 2015](#) before you start the programme as it is referenced throughout the programme and acts as the underpinning framework for your medicines management practice.

START


NetDimensions Talent Suite - Google Chrome

https://www.hseland.ie/ekp/servlet/ekp/contentItem/aicc_sid=EXP005025255&aicc_url=%2Fekp%2Fservlet%2Fekp%2Faicc&href=%2Fekp%2Fnd%2Ffresco%2Fcontent%2Frevisions%2F_5YcA6ly1oZe_cc

Managing Anaphylaxis

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Managing Anaphylaxis

Welcome to this refresher programme on Managing Anaphylaxis.

Please click **Start Programme** to begin.

Start Programme

14:38
14/09/2017

NMBI Guidance updated

Guidance to Nurses and Midwives on Medication Management

JULY 2007



An Bord Altranais

Standards for Registered Nurses and Midwives on Medication Administration (2018) DRAFT



Bord Altranais agus
Cnáimhseachais na hÉireann
Nursing and Midwifery Board of Ireland

The Rights of Vaccine Administration

Practice Standard 4

Nurses and midwives must adhere to the ten rights of medicine administration when administering medications to patients.

- ▶ The right patient
- ▶ The right vaccine
- ▶ The right dose
- ▶ The right route
- ▶ The right time
- ▶ The right reason
- ▶ The right form
- ▶ The right action
- ▶ The right documentation
- ▶ The right response

Equipment

- ▶ Medical Fridge and thermometer to maintain correct cold chain
- ▶ Emergency Equipment and Anaphylaxis Kit and up to date Anaphylaxis Guidelines
- ▶ Kidney dishes/cotton wool/plasters/needles/sharp boxes/hand washing facilities
- ▶ Work area to prepare vaccines
- ▶ Suitable seating area for parent and child for vaccines administration
- ▶ Good room layout
- ▶ Desk/computer for patients file



Before Immunisation

Can I give my baby anything before they are vaccinated?

You can give your baby milk to drink a few minutes before their vaccination. This can help to reduce pain at the injection site.

Do not give paracetamol to your baby before you go to your GP (doctor) surgery.

Should I get anything before my baby's vaccinations?

Yes.

Before your baby's first injections you should buy some liquid infant paracetamol (120mgs/5ml). This will reduce the fever after their MenB vaccines at 2 and 4 months.

What can I expect after my baby's 2 and 4 month vaccinations?

A fever is common after MenB vaccine.

Should I give my baby anything after their 2 and 4 month MenB vaccines?

You should give your baby 3 doses of liquid infant paracetamol after the 2 and 4 month visits.

1. Give 2.5 mls (60 mg) of liquid infant paracetamol at the time of the immunisation or shortly after.
2. Give a second dose of 2.5 mls (60 mg) 4 to 6 hours after the first dose.
3. Give a third dose of 2.5 mls (60 mg) 4 to 6 hours after the second dose.

If your baby weighs less than 3.5kg (7lb 7oz) at the 6 week check they will need to be re-weighed when they get vaccinated so you can give them the correct dose of paracetamol.

Remember

- If your baby is very unwell after getting a vaccine, they may be sick for some other reason. If you are worried about your baby, please contact your GP (doctor), practice nurse or public health nurse for further advice.
- To bring your baby's vaccine passport to each GP (doctor) visit so that your baby's vaccines are recorded and you have this information when they are older.
- You will need paracetamol for your baby's 2 and 4 month vaccinations.

For further information

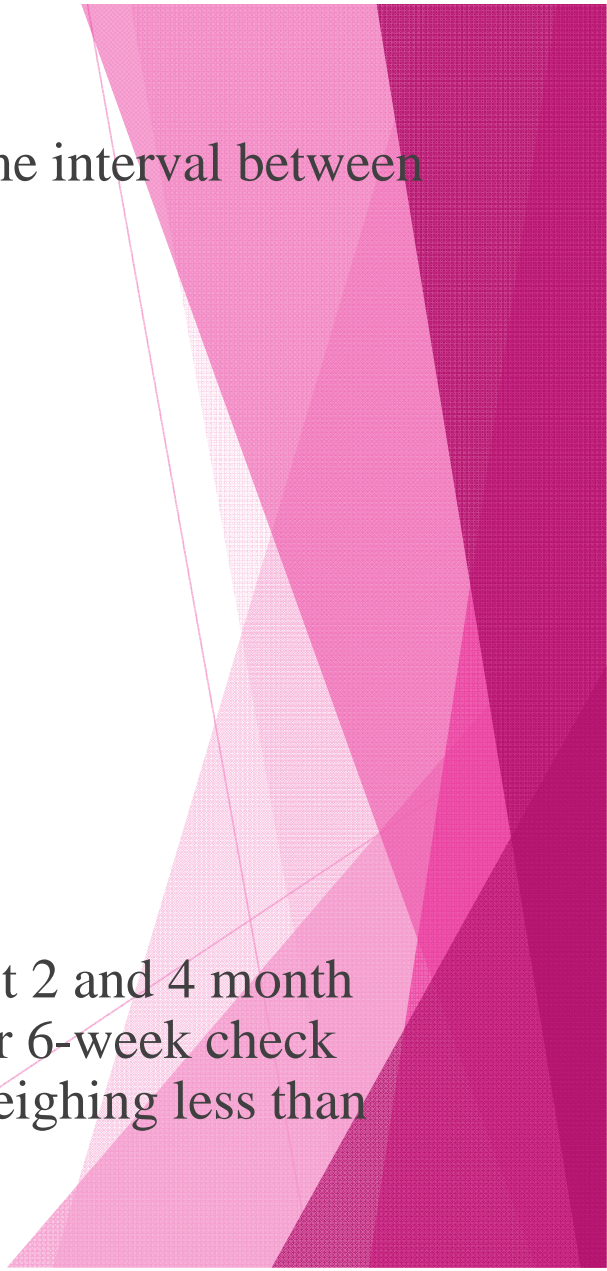
- Please read the booklet 'Your child's immunisation - a guide for parents'
- Visit the HSE's immunisation website at www.immunisation.ie


Consent

- ▶ Vaccination is not compulsory
- ▶ Informed consent - Code of Professional Conduct and Ethics for Nurses and Midwives, December 2014 (p,15)
- ▶ Use of the National Immunisation office materials
- ▶ Under 16 - Parent/legal Guardian
- ▶ Current Irish law - mother and married fathers have automatic parental responsibility
- ▶ See guidelines for vaccination in General Practice 2018 - page 14 re fathers right to consent if born outside of marriage
- ▶ Children in care of the HSE - contact social worker.
- ▶ Document consent

Vaccination Day

The background features abstract geometric shapes in various shades of pink and purple. On the right side, there is a large, complex shape composed of several overlapping triangles and polygons. On the left side, there is a smaller, simpler pink triangular shape. The overall design is modern and clean.

- 
- ▶ GP on site
 - ▶ Check prescription/childs age/date of last vaccine/correct time interval between vaccines/any post previous vaccination visit
 - ▶ Establish rapport
 - ▶ Check identity, address and contact details
 - ▶ Explain Vaccine Schedule
 - ▶ Check for contraindications
 - ▶ Check child's current health
 - ▶ Explain vaccine side effects
 - ▶ Allow time for parent to express concerns and address same
 - ▶ Consent
 - ▶ Post vaccination leaflets and advise re Infant Paracetamol post 2 and 4 month vaccinations. (Note :A child weighing less than 3.5kg at their 6-week check should be reweighed at the time of vaccination. Any child weighing less than 4kg should be given paracetamol at a dosage of 15 mg /kg.)

- 
- ▶ Advised to remain of site for 15 minutes post vaccines
 - ▶ No break to cold chain
 - ▶ Hand Hygiene
 - ▶ Prepare Vaccine and use within the recommend time frame
 - ▶ Check vaccine and expire date with parent.
 - ▶ Administer Vaccine
 - ▶ Ensure child is well
 - ▶ Sharps disposal
 - ▶ Re-assure Parent
 - ▶ Fill computer records and Patient Immunisation Passport
 - ▶ Advise Date of next Vaccination/Offer appointment
 - ▶ Advise to call back if any concerns – open door policy
 - ▶ Inform re out of hours service

Contraindications

- Confirmed anaphylactic reaction to the vaccine or to a constituent or a constituent of the syringe, syringe cap or vial (e.g. Latex anaphylaxis).
- Live vaccines (eg MMR)
 - Pregnancy
 - Immunosuppression, steroid and immunomodulator therapy (refer to the detailed guidance in the Immunisation Guidelines for Ireland).
- Rotavirus oral vaccine
 - babies aged 8 months and 0 days or older
 - babies with a past history of intussusception
 - babies with uncorrected gastrointestinal tract malformations
 - babies with a diagnosis of Severe Combined Immunodeficiency Disorder (SCID)
 - babies with a sugar intolerance.

Precautions/Times we might need to delay Vaccination

- ▶ See section 7.2 Guidelines to Vaccination in General Practice 2018
 - ▶ Acute severe febrile illness: Defer until recovered
 - ▶ Bleeding disorders
 - ▶ Immunosuppression
 - ▶ Topical Immunomodulators
- ▶ Also refer to agreed Practice Policy and Guidelines, eg discourage vaccines late evening or Friday where possible to attend at other times.

Vaccine Preparation

Remove vaccine from the fridge when client is ready for vaccination

Reconstitute vaccine in accordance with manufacture's instructions

- Applies to some of the vaccines; 6in1, MMR and Hib/Men C
- Attach 21 gauge needle provided to prefilled syringe containing diluent
- Insert syringe into the vial
- Mix and then draw the reconstituted vaccine back into the syringe
- Change the needle on the syringe ready for administration using correct needle gauge and length

Ensure the vaccine and colour and composition is in accordance with the Summary of Product Characteristics for that vaccines – if not discard the vaccine

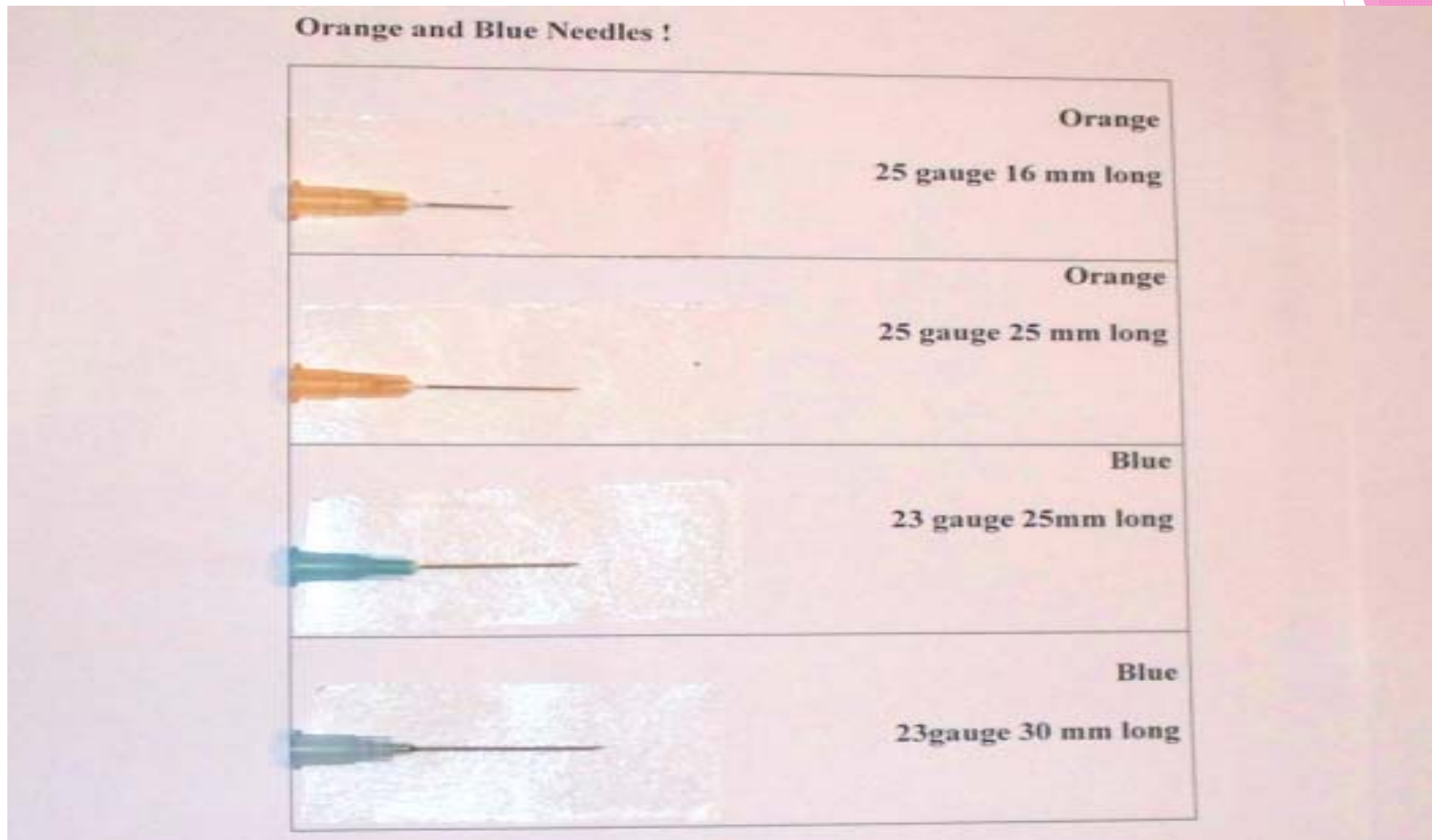
Needle Size

Patient's age	Site (see illustrations below)	Needle length and size
Birth to <12 months	Vastus lateralis muscle in anterolateral aspect of mid or upper thigh	25 mm* 23-25 gauge
12 to <36 months	Vastus lateralis or deltoid muscle (depending on muscle mass)	25 mm 23-25 gauge
3 years and older	Deltoid muscle (see diagram page 17)	25 mm** 23-25 gauge

* Use a 16 mm needle in infants under 2.5-3 kg.

** Use 40 mm needle in females >90 kg, males >118 kg.

Needle Size continued



Administration

- ▶ Position parent and child and position yourself for administration
- ▶ Give oral vaccines first (2&4 month vaccine give Rotavirus first) Hand Hygiene post Rotavirus
- ▶ The skin does not require cleaning before the vaccine is administered unless visibly dirty. In this instance the skin can be cleaned with soap and water. If an alcohol wipe is used the skin should be allowed to dry before the vaccine is injected.
- ▶ Gloves are not normally required when administering IM injections. However, if the client's skin or the vaccinator's skin is not intact gloves should be worn.
- ▶ Spread the skin of the administration site taut between the thumb and forefinger (to avoid injecting into subcutaneous tissue and to isolate the muscle). In small infants and others with little muscle mass the tissue around the injection site may be gently bunched up.
- ▶ Insert the needle rapidly and fully at a 90 degree angle to the skin and administers single dose of 0.5ml of the appropriate vaccine by intramuscular (IM) injection. Inject the vaccine into the muscle over 1-2 seconds.
- ▶ Rapidly withdraw the needle and apply light pressure to the injection site for several seconds with a dry cotton ball or gauze.
- ▶ Leave 2.5 Cm between two injections given in the same limb. Record accurately the site and vaccine administered
- ▶ Don't delay as tolerated by child between vaccines



Rotarix – oral vaccine

- ▶ Ensure the baby is sitting in a reclining position.
- ▶ Remove protective tip cap from the oral applicator.
- ▶ Insert applicator tip into the baby's mouth, towards the inner cheek.
- ▶ Administer vaccine into the baby's mouth.
- ▶ The applicator containing the vaccine should be aimed down one side and towards the back of the baby's mouth.
- ▶ The applicator should not be inserted so far back that the baby gags.
- ▶ All the applicator contents should be given to the baby.

COMFORTING RESTRAINT

FOR IMMUNIZATIONS

- **The method:**

This method involves the parent in embracing the child and controlling all four limbs. It avoids “holding down” or overpowering the child, but it helps you steady and control the limb of the injection site.

- **For infants and toddlers:**



Have parent hold the child on parent's lap.

1. One of the child's arms embraces the parent's back and is held under the parent's arm.
2. The other arm is controlled by the parent's arm and hand. For infants, the parent can control both arms with one hand.
3. Both legs are anchored with the child's feet held firmly between the parent's thighs, and controlled by the parent's other arm.

Multiple Injection technique for children



IM site for infants and toddlers (birth to 36 months of age)

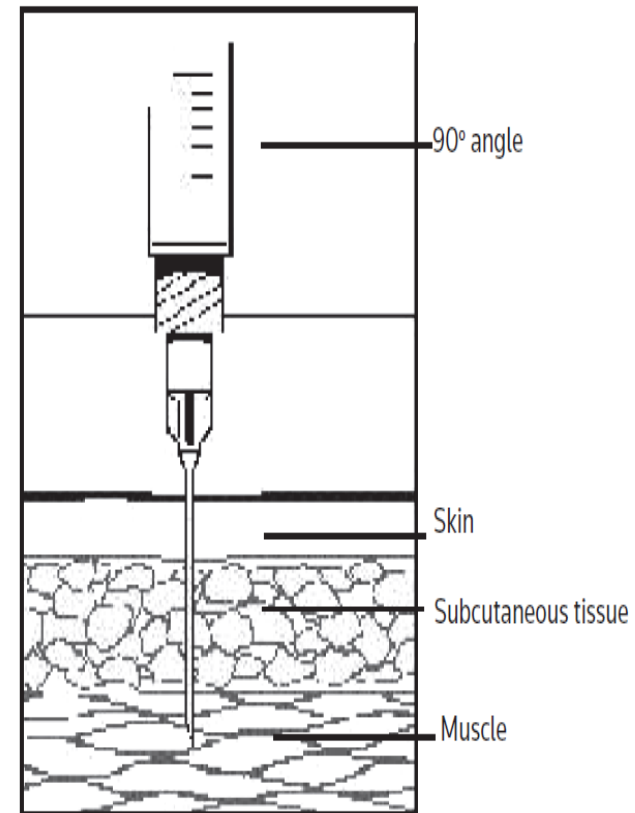


Vastus lateralis
(shaded area)

IM injection site area


Insert needle at 90° angle into anterolateral aspect of middle or upper thigh.

General Immunisation
Procedures • Sept 2016



Suggested site plan when administering two or more IM vaccines at same visit

Age	LEFT anterolateral	RIGHT anterolateral
2 months	Men B (give 1 st)	6:1 + PCV
4 months	Men B (give 1 st)	6:1
6 months	PCV	6:1 + Men C
12 months	Men B	MMR
13 months	PCV	Hib/Men C



Immunisation Passport

www.immunisation.ie

After Immunisation Information

Children born on or after 1 October 2016 are offered the vaccines in the table below.

Age	Vaccination
2 months	Visit 1 6 In 1+PCV+MenB+Rotavirus 3 Injections+Oral Drops
4 months	Visit 2 6 In 1+MenB+Rotavirus 2 Injections+Oral Drops
6 months	Visit 3 6 In 1+PCV+MenC 3 Injections
No Rotavirus vaccine on or after 8 months 0 days	
12 months	Visit 4 MMR+MenB 2 Injections
13 months	Visit 5 Hib/MenC+PCV 2 Injections

Your child needs five GP (doctor) visits. Bring your child's vaccine passport to each GP (doctor) visit so that your child's vaccines are recorded and you have this information when they are older.

www.immunisation.ie
Order code: 11903055

NEXT APPOINTMENT



Remember you will need paracetamol for your baby's 2 and 4 month vaccinations.



What common reactions can my child get after being vaccinated and what should I do?

Common reaction	What to do
At 2 and 4 months (Visits 1 and 2)	
A fever is common after MenB vaccine	<ul style="list-style-type: none"> Give liquid infant paracetamol <ol style="list-style-type: none"> 1. Give 2.5 ml (50 mg) at the time of the immunisation or shortly after. 2. Give a second dose of 2.5 ml (50 mg) 4 to 6 hours after the first dose. 3. Give a third dose of 2.5 ml (50 mg) 4 to 6 hours after the second dose. 4. Give a fourth dose 4-6 hours after the third dose if your baby still has a fever.
Soreness, swelling and redness in the area where the injection was given	<ul style="list-style-type: none"> Make sure clothes are not too tight or rubbing against the area where the injection was given
Mild diarrhoea after the rotavirus vaccine	<ul style="list-style-type: none"> Give extra milk to drink Wash your hands carefully after changing and disposing of your baby's nappy.
At 6, 12 and 13 months (Visits 3, 4 and 5)	
Soreness, swelling and redness in the area where the injection was given	<ul style="list-style-type: none"> Give paracetamol or ibuprofen to relieve aches and pains Make sure clothes are not too tight or rubbing against the area where the injection was given
Fever (over 39°C)	<ul style="list-style-type: none"> Do not overdress your baby Make sure their room isn't too hot Give extra fluids to drink Give paracetamol or ibuprofen to lower the fever
Headache or irritability	<ul style="list-style-type: none"> Give paracetamol or ibuprofen to relieve aches and pains



If your child received the MMR vaccine they may get a rash 6-10 days later (mini measles). This is not contagious.

Remember, if your baby is very unwell after getting a vaccine, they may be sick for some other reason. If you are worried about your baby, please contact your GP (doctor), practice nurse or public health nurse for further advice.

For further information

- Please read the booklet "Your child's immunisation - a guide for parents"
- Visit the HSE's immunisation website at www.immunisation.ie

Documentation

- ▶ Record vaccination administered onto child's computer file
- ▶ Ensure the HSE data return files are completed
- ▶ Complete Immunisation passport - Patient Vaccine Record Booklet
- ▶ Date of next Vaccination/offer appointment
- ▶ Give “After immunisation” tear off sheet

Vaccine Administration Related Roles

- ▶ Vaccine ordering/storage/maintenance of cold chain
- ▶ Vaccine delivery/stock rotation/Inputting vaccines and batch numbers
- ▶ Vaccine returns
- ▶ Fridge Cleaning
- ▶ Emergency Equipment Checks
- ▶ Ordering of other vaccine related equipment e.g. needles/plasters/cotton wool etc.
- ▶ Recall system
- ▶ Vaccine monthly returns
- ▶ Monitoring Vaccination payments
- ▶ Vaccine defaulter lists
- ▶ Completion of Vaccination refusal forms
- ▶ Managing late entrance

Resources

- ▶ National Immunisation Office
<https://www.hse.ie/eng/health/immunisation/>
- ▶ Assistant Director of Public Health Nursing with responsibility for Immunisation National Immunisation Office
- ▶ Consultant in Public Health Medicine in the local Department of Public Health
- ▶ Professional Development Coordinator for Practice Nurses
- ▶ Health Protection Surveillance Centre <http://www.hpsc.ie/>
- ▶ European Centre for Disease Prevention and Control <http://ecdc.europa.eu>



THE END

THANK YOU FOR YOUR ATTENTION