

PATIENT VERSION

---



## CHILDREN'S VACCINATION, MALARIA AND MOSQUITO GUIDE.

---



---

**Number One for personal health**

Registered by the Healthcare Commission: E010000521



Welcome to the Number One Health Guide on children's Vaccination, Malaria and Mosquito prevention.

This guide is applicable for all children from birth to 16 years of age.

This version of the guide was created in January 2008 and is updated on an annual basis.

## CONTENTS

- VACCINATIONS AVAILABLE FROM BIRTH PAGE 3
- VACCINATIONS THAT CAN BE GIVEN FROM TWO MONTHS PAGE 4,5
- VACCINATIONS THAT CAN BE GIVEN FROM SIX MONTHS PAGE 6
- VACCINATIONS THAT CAN BE GIVEN FROM NINE MONTHS PAGE 7
- VACCINATIONS THAT CAN BE GIVEN FROM 1 YEAR PAGE 8, 9
- VACCINATIONS THAT CAN BE GIVEN FROM 18 MONTHS PAGE 10
- VACCINATIONS THAT CAN BE GIVEN FROM 2 YEARS PAGE 11
- VACCINATIONS THAT CAN BE GIVEN FROM 10 YEARS PAGE 12
- OTHER VACCINATIONS PAGE 13, 14
- OTHER RELEVANT VACCINATION INFORMATION PAGE 15
- ADVICE ON MALARIA AND MOSQUITO BITES PAGE 16
- SIDE EFFECTS OF VACCINES PAGE 17
- US IMMUNISATION SCHEDULE PAGE 19, 20, 21
- ABOUT NUMBER ONE HEALTH GROUP PAGE 22

No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
BIRTH**

**VACCINATIONS THAT CAN BE GIVEN FROM BIRTH**

**THE BCG VACCINE**

This can be given from birth, however the dose up to 1 year–12 months of age– is half of the adult dose (i.e. it is 0.05 ml only).

The Number One Health policy is not to require a Mantoux test in children under 6 years. From 6 years a Mantoux test is done first. The Mantoux is read at three days and the BCG only given to those who have a negative Mantoux test. If a parent requests the Mantoux to be given in the lateral thigh (to prevent arm scarring) the Number One Health Group will comply with this request. All parents who request BCG are informed that the vaccine causes an abscess type reaction with subsequent scarring at the site. Parents should consult with the Number One Health Group about any complications that occur after vaccination and they are advised to do this instead of consulting with their GP, walk-in centre or other non-expert health provider. Our general advice is that no further therapy is required. There is no evidence that bursting an abscess or treating with antibiotics after BCG improves the outcome. They do settle after time.

Ideally no other vaccination should be given for at least 3 months into the same arm as the BCG immunisation, due to the risk of lymphadenitis.

**OTHER VACCINES THAT CAN BE GIVEN FROM BIRTH:**

**RABIES**

This is the same dose as adults, to be given as either a rapid or a slow regime.

Rapid regime: Day 0, day 7, day 21 or 28

Slow regime: Day 0, one month and six months.

Boosters are recommended at three years. The Number One Health Group does not provide intradermal rabies vaccine.

**HEPATITIS B**

This is a common childhood vaccine in many countries other than the UK. It can be given as a rapid or slow course.

Rapid regime: Day 0, one month old and four–six months is recommended.

Boosters approximately every ten years.

No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
2 MONTHS**

**VACCINES THAT CAN BE GIVEN FROM TWO MONTHS  
OF AGE AND NOT EARLIER**

**ROTAVIRUS**

Rotavirus stops infant diarrhoea and vomiting.

Children are most likely to get rotavirus disease between November and May, depending on the part of the country.

Children can get rotavirus infection by being around other children who are already infected.

Children should get 2 doses of our rotavirus vaccine:

- The first dose should be given between 6 and 12 weeks of age. The vaccine has not been studied when started among children outside of that age range.
- Children should have been given both doses by 24 weeks of age.

Rotavirus vaccine may be given at the same time as other childhood vaccines. Children who get the vaccine may be fed normally afterward.

Rotavirus vaccine is an oral (swallowed) vaccine; it is not given by injection. Rotavirus vaccine will not prevent diarrhoea or vomiting caused by other germs, but it is very good at preventing diarrhoea and vomiting caused by rotavirus. About 98% of children who get the vaccine are protected from severe rotavirus diarrhoea, and about 74% do not get rotavirus diarrhoea at all.

**CHILD PNEUMONIA VACCINE**

Three doses each. The Child Pneumonia vaccine is a seven-valent pneumococcal conjugate vaccine. Three doses at two months of age, the second at four months of age and the third at 13 months of age.

NOTE – This third dose can be given with the MMR vaccine. It should be noted that the Child Pneumonia Vaccine is a different pneumococcal vaccine from the adult pneumonia vaccine.

**FIVE-IN-ONE VACCINE**

This is a regime of five vaccines is given in one vial.

These vaccines are for diphtheria, tetanus, polio, pertussis and HIB, which is Haemophilus influenzae. the Five-in-One is given at two months, three months and four months. In theory, the separate vaccines could also be given at these intervals.



**VACCINES  
FROM  
2 MONTHS**

**MENINGITIS C**

This is three doses that can either be given at one month apart or, in the new UK schedule, MenC would be given at three months and at four months, and then at 12 months it would be given either in combination with HIB in one dose, or HIB would be given in addition. Please note that the plan is purposely to give the MenC and the HIB at 12 months, one month before the MMR is given and the Pevnar is given.

In summary, at 12 months the child would receive MenC and HIB and at 13 months, Pevnar and MMR.

Please also note that the MenC vaccine is different from the meningitis ACWY vaccine. We recommend that from 2 years of age children instead of MenC receive a single dose of the ACWY vaccine with three yearly boosters instead.



No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
6 MONTHS**

**VACCINES THAT CAN BE GIVEN FROM SIX MONTHS  
AND NO EARLIER**

**INFLUENZA VACCINE**

The dose from 6 months to 3 years is half the normal dose.  
0.25mls (children aged 6 months – 3 years).

If your child under three years old has never had the flu vaccine before they should have a second half dose four weeks later. The fees for half doses are the same as for full. From three years children receive the adult dose once per year only.



No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
9 MONTHS**

**VACCINES THAT CAN BE GIVEN FROM 9 MONTHS  
AND NO EARLIER**

**YELLOW FEVER**

This is given in the same dose as adults. This cannot be given earlier than nine months because of the risk of brain inflammation called encephalitis. Parents have to protect their children from mosquitoes at all ages but this IS the only protection available before 9 months. If the child has a history of egg allergy, it has to be very severe for us not to give the vaccine.



No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
1 YEAR**

**VACCINES THAT CAN BE GIVEN FROM 1 YEAR AND  
NO EARLIER**

**CHICKEN POX**

Some parents are happy for their child to acquire 'natural chickenpox' infection but others prefer their children not to get scars. It is also the policy of some countries, including the USA, to vaccinate children.

Children between the age of 1 year and 12 years receive a single 0.5 mL dose.

Teenagers from 13 years and adults need to have two doses of 0.5 mL. The second dose should be given 4–8 weeks after the first dose.

After chickenpox vaccination your child may experience a local rash at the injection site or a more generalised rash in the mouth. If such rashes occur we advise you to:

- Avoid giving your child salicytates (aspirin–or aspirin–based drugs), which in any case should not be given to children under 12 years.
- Ensure that no women who are pregnant and have never had chickenpox or the full vaccination course, live in the same house as the vaccinated child for 6 weeks.

**Please note regarding Adults and chickenpox:**

As an adult chickenpox can be very severe, it can cause a pneumonia which in some cases can be fatal. If an adult tells us that they have not had a chickenpox vaccine – our recommendation is for them to have it to protect themselves. All Health care workers without a history or evidence of chickenpox infection are expected by the Chief Medical Officer to be vaccinated.

**JAPANESE ENCEPHALITIS**

Japanese encephalitis (JE) is a mosquito–borne viral encephalitis caused by a flavivirus and is the leading cause of viral encephalitis in Asia.

It is endemic in rural areas, especially where rice growing and pig farming coexist, and epidemics occur in rural and occasionally in urban areas. Highest transmission rates occur during and just after wet seasons, when mosquitoes are most active, but seasonal patterns vary both within individual countries and from year to year. This disease is not transmitted from person to person.

The incubation period is from 5 to 15 days. Illness ranges from asymptomatic infection (about 1 in 200 infections is estimated to become clinically apparent) to severe encephalitis with a high mortality and a high rate (approximately 30 per cent) of permanent neurological sequelae in survivors.



**VACCINES  
FROM  
1 YEAR**

The recommended vaccine schedule is three doses of 1ml in those three years of age and older on days 0, 7-14 and 28. Full immunity takes up to a month to develop.

For children under 3 years of age the dose for each injection is 0.5ml by subcutaneous injection (this is half the normal dose).

There is no safety or efficacy data for use in children under 1 year of age. Under 1 the manufacturers recommend judging the risk of exposure against the unpredictable immune response that may be expected due to immaturity of the immune mechanism and the relative ease of taking physical protective measures against mosquito bites at this age. Safety studies have shown no increase in adverse events associated with younger age. However, we like to warn you of side effects for this particular vaccine. It is also a large volume vaccine and is spread over two doses in the sense that it requires to be given deeply and subcutaneously and the needle will be moved from one part of the arm to the other to give the total dosage. It is recorded in a special Japanese encephalitis vaccine book and we are happy to take calls about any potential side effects.

**HEPATITIS A**

The Junior vaccine is different from the adult one.

**TICK-BORNE ENCEPHALITIS**

The Junior vaccine can be given as 0.25ml in 3 doses. If this vaccine is used it can be used between the ages of 1 year and 16 years.

The first dose is usually followed by the second dose 1-3 months later, but in urgent cases the second dose can be given two weeks after the first dose.

No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
18  
MONTHS**

**VACCINES THAT CAN BE GIVEN FROM 18 MONTHS  
AND NO EARLIER**

**TYPHOID**

This is the same dose as the adult.



No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



**VACCINES  
FROM  
2 YEARS**

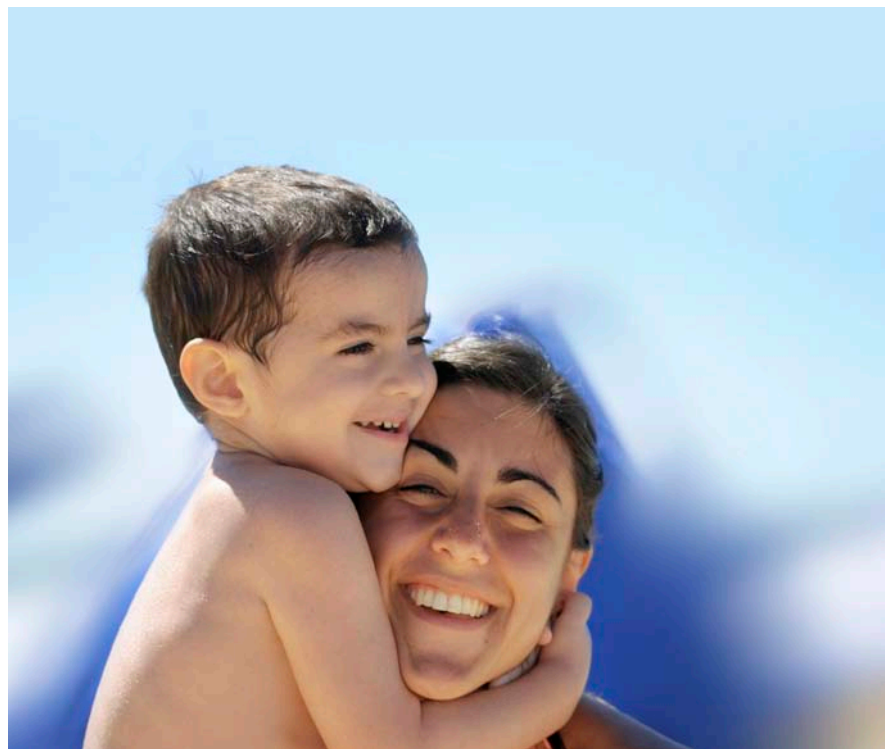
**VACCINES THAT CAN BE GIVEN FROM 2 YEARS AND  
NO EARLIER**

**CHOLERA**

This will be rarely needed since children can be protected from unclean water. The Number One Health Group recommends that you buy an Aquapure Traveller if your really feel there is a risk of exposure to cholera.

This is an Oral vaccine.

Adults and children from 2-6 years – 3 doses 1-6 weeks apart.



No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



VACCINES  
FROM  
10 YEARS

VACCINES THAT CAN BE GIVEN FROM 10 YEARS AND  
NO EARLIER

**DIPHTHERIA AND TETANUS**

The vaccine given is Diftavax.



No more worries about lost vaccination records. The Number One Health Group can create a secure Internet-based vaccination record for you, accessible wherever you are in the World for £60 per person per year by Direct Debit.



## OTHER VACCINES:

**ROTAVIRUS** vaccine. Newly available from May 2006.

Oral vaccine – 2 doses of an attenuated human strain.

Rotavirus vaccine offers 85–98% protection against severe disease, and 100% protection against hospitalisation.

The new vaccine does not cause intussusception.

Both the GSK and the Merck vaccine have had extensive trials and one already has FDA approval (more than 60,000 participants per trial making these the largest and most expensive safety trials of any vaccine ever tested before licensing).

### What is rotavirus?

Rotavirus is a virus (discovered 30 years ago) that causes severe diarrhoea, mostly in babies and young children. It is often accompanied by vomiting and fever. Rotavirus is not the only cause of severe diarrhoea, but it is one of the most serious.

Worldwide it kills 610,000 children every year (which accounts for 5% of all deaths in those younger than 5 years).

Each year in the United States rotavirus is responsible for:

- more than 400,000 doctor visits
- more than 200,000 emergency room visits
- 55,000 to 70,000 hospitalisations
- 20–60 deaths.

In the UK rotavirus accounts for 18,000 hospitalisations per year, with 1 in 4 children under 5 seeing their GP about it.

Almost all children in the U.S. and the UK are infected with rotavirus before their 5th birthday.

It is NOT a mild disease and costs parents time and money. When an infant has rotavirus infection it can be hard to get them to take the ORS.

Just 10 Virus particles can infect a child. Within 24 hours 10 viruses become millions in the gut.

Children who do survive their first infection suffer no long-term consequences and few get a second attack.

Children are most likely to get rotavirus disease between November and May, depending on the part of the country.

Children can get rotavirus infection by being around other children who are already infected.

Children should get 2 doses of our rotavirus vaccine.

- The first dose should be given between 6 and 12 weeks of age. The vaccine has not been studied when started among children outside that age range.
- Children should have received both doses by 24 weeks of age.



The Rotavirus vaccine may be given at the same time as other childhood vaccines. Children who get the vaccine may be fed normally afterward.

The Rotavirus vaccine is an oral (swallowed) vaccine; it is not given by injection. The vaccine will not prevent diarrhoea or vomiting caused by other germs, but it is very good at preventing diarrhoea and vomiting caused by rotavirus. About 98% of children who get the vaccine are protected from severe rotavirus diarrhoea, and about 74% do not get rotavirus diarrhoea at all.

### What are the risks from rotavirus vaccine?

A vaccine, like any medicine, could possibly cause serious problems, such as severe allergic reactions. The risk of rotavirus vaccine causing serious harm, or death, is extremely small. Getting the rotavirus vaccine is much safer than contracting the disease.

#### Mild problems

Children are slightly (1-3%) more likely to have mild, temporary diarrhea or vomiting within 7 days after getting a dose of rotavirus vaccine than children who have not received the vaccine. Moderate or severe reactions have not been associated with this vaccine.

If rare reactions occur with any new product, they may not be identified until thousands, or millions, of people have used it. Like all vaccines, rotavirus vaccine will continue to be monitored for unusual or severe problems.

**MENITORIX** - to protect against both Haemophilus Influenzae and Meningitis C. From two - 12 months three separate 0.5ml injections at intervals of at least one month. Booster forth dose from 12 months of age.

**CERVICAL CANCER VACCINE** can be given to girls from nine years of age. We are happy to discuss possible benefits to boys which is an 'off license use'.



## OTHER CHILDREN'S VACCINATION INFORMATION:

### IMMUNOSUPPRESSION POLICY

In any child who is known to have leukaemia, to be on immunosuppressants, to have HIV or any other cause of immunosuppression, our policy is not to give them live vaccines which include chickenpox, MMR, Rotavirus, Cholera and BCG.

### CATCH-UP VACCINES

This is an issue for ex-patriate children, children who have moved around a lot or children whose families have previously decided not to give them vaccinations. Our policy is pragmatic, to give them a catch-up vaccination, following as closely as possible the normal schedule that we would have given them before.

We are delighted to give children in the UK the same schedule that they would have received in other countries such as the US or France. For example, this may mean giving them the Hepatitis B, the chickenpox or the flu vaccine according to those countries' schedules.

### TECHNIQUE FOR VACCINATION

Apart from BCG (on request), all of the vaccines are given in the arm. Some are subcutaneous, some are deep subcutaneous and some are intramuscular. The angle of entry of the needle varies. Please note that it is a skin injection for BCG and the Mantoux test. The Number One Health doctor pushes the needle hard on to the syringe but children do move and some vaccines can be lost from the needle and the syringe separated. The Number One Health policy is that if a child will tolerate repeat vaccination then this will be undertaken at no extra cost to the parent. The parent needs to hold the child on their lap with their head looking away from the arm to be vaccinated. The top hand of the parent holds the head, the other arm of the parent holds the arm of the child to the side around the elbow area. Children cry – this is to be expected – but most recover quickly. We offer them a sticker and it helps if you offer the child a treat. EMLA anaesthetic cream can be used on the area to be vaccinated to reduce the feeling of the needle. However, the parent does need to arrive with the child 40 minutes before the appointment for the vaccination. If your child has an allergy of plasters, please tell us in advance.

### MULTIPLE VACCINES

If the child can cope, several vaccines can be given into each arm. We normally leave a space of about 1 cm between each vaccine.



## **ADDITIONAL NOTES:**

### **MALARIA MEDICATION**

For babies under 6 kg in weight there is no medication available. The use of non-drug measures is recommended. From 6 kg a dose-based weekly chloroquine syrup is considered safe for the child but this is not as effective as some of the other drugs in certain parts of the world. The Number One Health Group will provide a weight dose private prescription for the syrup. The syrup is required to be used one week before the malarious area, during the malarious area and four weeks after, on a weekly basis.

From 11 kg Malarone is safe in children's doses based on weight. The advantage of Malarone is that it is taken just one day before, daily during the malarious area and for only seven days after.

An alternative from 6 kg is Lariam which is on a dose-per-weight basis (for example a 3 month old child would receive a quarter of a tablet per week). One advantage of this is that it is a once a week treatment but still must be taken one week before travel to the malarious area, during the malarious area and four weeks after. It is well tolerated by children. It is not to be given to epileptic children and some caution is required if there is a past history of febrile convulsions.

The Number One Health Group never gives DOXYCYCLINE to children under 12 Years, pregnant women or women who are breast-feeding.

## **HOW TO AVOID MOSQUITO BITES:**

This is relevant for Japanese encephalitis, Dengue, Chikungunya, Yellow Fever, malaria and types of parasitic worms. For all babies, a treated mosquito net over the cot is a sensible idea. Air conditioning in the room, fans in the room and nets over the windows that have been treated with permethrin, are also a good idea. You can buy a mosquito net to create these nets as required. There are several repellents. Some parents are wary about using DEET because it eats into plastic, however it has not been shown to be specifically harmful to children. However, non-DEET alternatives that have been tested at the London School of Hygiene and Tropical Medicine by someone putting their arms into a cage, one treated and one untreated, have been shown to be effective as well. These include Jungle Formula, a product called Bayrepel, a product called Mosiguard and a product called Autan. The mosquito repellents need to be applied every four to six hours on exposed skin and it should not be applied above the eye level.

## **REPELLENTS AND SUNSCREEN:**

It should be noted it is best to apply the repellent first and sunscreen on top. If your children go swimming then the repellent needs to be re-applied after they come out of the water and they are dry.



## GUIDE TO THE SIDE EFFECTS OF VACCINES:

A high temperature can occur. A combination of Calpol and Nurofen can be used as well as cold baths and tepid sponges. If a febrile fit occurs it is most likely to occur with a highly reactive vaccine such as Japanese encephalitis. Do call the doctor, the local A&E, the local walk-in, NHS Direct or us and explain that the child had the relevant vaccine on that date. Local redness is to be expected at the site. If concerned, do call one of the Number One Health team. As previously noted, it is expected that the BCG causes an abscess type reaction and scarring. However, we are always happy to review the scar for you.

Severe reactions to vaccines whilst in the clinic are very rare. We have never seen one but we are prepared. We have oxygen on site, a defibrillator, adrenalin and antihistamine.

Adrenalin:

Description of treatment

Name of Medicine	Epinephrine (Adrenaline) 1:1000 (1mg/ml)
POM/P/GSL	POM
Dose/s	Children under 1yr: 0.05 ml, 1yr: 0.1 ml, 2yr: 0.2 ml, 3-4yrs: 0.3 ml, 5yrs and over: 0.5 ml, Adult: 0.5 to 1.0 ml
Route Method	Slow deep intramuscular injection preferably into the antero-lateral aspect of the thigh
Frequency	Epinephrine may be repeated every 10-15 minutes according to patient's response to a maximum of 3 doses
Total dose number	3
Follow up	Seek further help dial 999 and transfer to hospital. Do not leave patient unattended. Note time of administration

The New UK Schedule

2 months	DTaP/IPV/Hib + pneumococcal vaccine
3 months	DTaP/IPV/Hib + MenC vaccine
4 months	DTaP/IPV/Hib + MenC + pneumococcal vaccine
12 months	Hib/Men C
13 months	MMR + pneumococcal vaccine

DTaP/IPV/Hib is a single vaccine that protects against diphtheria, tetanus, pertussis, polio and Hib.

MenC protects against meningitis C

Hib/ MenC is a combined vaccine protecting against Hib and Meningitis C



## UK schedule – (correct at date of publication)

When to immunise	Diseases protected against	Vaccine given
<b>Two months old</b>	Diphtheria, tetanus, pertussis (whooping cough), polio and <i>Haemophilus influenzae</i> type b (Hib) Pneumococcal infection	DTaP/IPV/Hib + Pneumococcal conjugate vaccine, (PCV)
<b>Three months old</b>	Diphtheria, tetanus, pertussis, polio and <i>Haemophilus influenzae</i> type b (Hib) Meningitis C	DTaP/IPV/Hib + MenC
<b>Four months old</b>	Diphtheria, tetanus, pertussis, polio and <i>Haemophilus influenzae</i> type b (Hib)  Meningitis C Pneumococcal infection	DTaP/IPV/Hib + MenC + PCV
<b>Around 12 months</b>	<i>Haemophilus influenzae</i> type b (Hib) Meningitis C	Hib/MenC
<b>Around 13 months old</b>	Measles, mumps and rubella Pneumococcal infection	MMR + PCV
<b>Three years and four months or soon after</b>	Diphtheria, tetanus, pertussis and polio Measles, mumps and rubella	DTaP/IPV or dTaP/IPV +MMR
<b>Thirteen to eighteen years old</b>	Diphtheria, tetanus, polio	Td/IPV

### Non-routine immunisations

When to immunise	Diseases protected against	Vaccine given
<b>At birth</b> (to babies who are more likely to come into contact with TB than the general population)	Tuberculosis	BCG
<b>At birth</b> (to babies whose mothers are hepatitis B positive)	Hepatitis B	Hep B

### 2, 3 and 4 months old

You will be offered DTaP/IPV/Hib, MenC and PCV vaccinations for your baby during the first four months of their life.

When your baby is 2 months old, you will be asked to bring them for their first DTaP/IPV/Hib injection against diphtheria, tetanus, pertussis (whooping cough), polio and Hib.

They will then be asked to come back for booster doses of DTaP/IPV/Hib when they are 3 and 4 months old.

- [More information on DTaP/IPV/Hib](#)

At 3 and 4 months of age they will be offered the meningitis C vaccine, which can be given at the same time.

- [More information on Meningitis C](#)

With their vaccination at 2 and 4 months of age they will also be offered vaccination against pneumococcal infection, which is given as an injection of Pneumococcal conjugate vaccine (PCV).



## Around 12 months

Around the time of your baby's first birthday, they will be offered a vaccination that provides the final booster dose for protection against two diseases, *Haemophilis influenzae* type b (Hib) and meningitis C.

This is given as a single injection.

- [More information on Hib/MenC](#)

## Around 13 months old

Just after your baby turns one, they will be offered their first dose of the triple MMR vaccine against measles, mumps and rubella.

This is given as a single injection.

- [More information on MMR](#)

They will also be offered a third final dose of PCV which further boosts their protection against pneumococcal infection.

## 3 years and four months or soon after

Before your child starts school, they will be offered the dTaP/IPV or DTaP/IPV vaccines which protect against diphtheria, tetanus, pertussis (whooping cough) and polio.

This is given as a single injection.

- [More information on dTaP/IPV and DTaP/IPV](#)

They will also be offered a booster dose of MMR against measles, mumps and rubella, which is also given as a single injection.

- [More information on MMR](#)

## 13 to 18 years old

13-18 year olds are offered Td/IPV at school. It is given as a single injection in the upper arm and protects against diphtheria, tetanus and polio.



**Recommended Immunization Schedule for Persons Aged 7–18 Years—UNITED STATES • 2008**  
*For those who fall behind or start late, see the green bars and the catch-up schedule*

Vaccine ▼	Age ►	7-10 years	11-12 years	13-18 years
Diphtheria, Tetanus, Pertussis <sup>1</sup>		<i>see footnote 1</i>	<b>Tdap</b>	<b>Tdap</b>
Human Papillomavirus <sup>2</sup>		<i>see footnote 2</i>	<b>HPV (3 doses)</b>	<b>HPV Series</b>
Meningococcal <sup>3</sup>		<b>MCV4</b>	<b>MCV4</b>	<b>MCV4</b>
Pneumococcal <sup>4</sup>			<b>PPV</b>	
Influenza <sup>5</sup>			<b>Influenza (Yearly)</b>	
Hepatitis A <sup>6</sup>			<b>HepA Series</b>	
Hepatitis B <sup>7</sup>			<b>HepB Series</b>	
Inactivated Poliovirus <sup>8</sup>			<b>IPV Series</b>	
Measles, Mumps, Rubella <sup>9</sup>			<b>MMR Series</b>	
Varicella <sup>10</sup>			<b>Varicella Series</b>	

 Range of recommended ages  
 Catch-up immunization  
 Certain high-risk groups

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2007, for children aged 7–18 years. Additional information is available at [www.cdc.gov/vaccines/recs/schedules](http://www.cdc.gov/vaccines/recs/schedules). Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components of the vaccine are not

contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective Advisory Committee on Immunization Practices statement for detailed recommendations, including for **high risk conditions**: <http://www.cdc.gov/vaccines/pubs/ACIP-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete VAERS form is available at [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone, 800-822-7967.

- Tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).** (Minimum age: 10 years for BOOSTRIX® and 11 years for ADACEL™)
  - Administer at age 11–12 years for those who have completed the recommended childhood DTP/DTaP vaccination series and have not received a tetanus and diphtheria toxoids (Td) booster dose.
  - 13–18 year olds who missed the 11–12 year Tdap or received Td only, are encouraged to receive one dose of Tdap 5 years after the last Td/DTaP dose.
- Human papillomavirus vaccine (HPV).** (Minimum age: 9 years)
  - Administer the first dose of the HPV vaccine series to females at age 11–12 years.
  - Administer the second dose 2 months after the first dose and the third dose 6 months after the first dose.
  - Administer the HPV vaccine series to females at age 13–18 years if not previously vaccinated.
- Meningococcal vaccine.**
  - Administer MCV4 at age 11–12 years and at age 13–18 years if not previously vaccinated. MPSV4 is an acceptable alternative.
  - Administer MCV4 to previously unvaccinated college freshmen living in dormitories.
  - MCV4 is recommended for children aged 2–10 years with terminal complement deficiencies or anatomic or functional asplenia and certain other high-risk groups.
  - Persons who received MPSV4 3 or more years prior and remain at increased risk for meningococcal disease should be vaccinated with MCV4.
- Pneumococcal polysaccharide vaccine (PPV).**
  - Administer PPV to certain high-risk groups.
- Influenza vaccine.**
  - Administer annually to all close contacts of children aged 0–59 months.
  - Administer annually to persons with certain risk factors, health-care workers, and other persons (including household members) in close contact with persons in groups at higher risk.

- Administer 2 doses (separated by 4 weeks or longer) to children younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time last season, but only received one dose.
  - For healthy nonpregnant persons (those who do not have underlying medical conditions that predispose them to influenza complications) ages 2–49 years, either LAIV or TIV may be used.
- Hepatitis A vaccine (HepA).**
    - The 2 doses in the series should be administered at least 6 months apart.
    - HepA is recommended for certain other groups of children, including in areas where vaccination programs target older children.
  - Hepatitis B vaccine (HepB).**
    - Administer the 3-dose series to those who were not previously vaccinated.
    - A 2-dose series of Recombivax HB® is licensed for children aged 11–15 years.
  - Inactivated poliovirus vaccine (IPV).**
    - For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if the third dose was administered at age 4 years or older.
    - If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
  - Measles, mumps, and rubella vaccine (MMR).**
    - If not previously vaccinated, administer 2 doses of MMR during any visit, with 4 or more weeks between the doses.
  - Varicella vaccine.**
    - Administer 2 doses of varicella vaccine to persons younger than 13 years of age at least 3 months apart. Do not repeat the second dose, if administered 28 or more days following the first dose.
    - Administer 2 doses of varicella vaccine to persons aged 13 years or older at least 4 weeks apart.

The Recommended Immunization Schedules for Persons Aged 0–18 Years are approved by the Advisory Committee on Immunization Practices ([www.cdc.gov/vaccines/recs/acip](http://www.cdc.gov/vaccines/recs/acip)), the American Academy of Pediatrics (<http://www.aap.org>), and the American Academy of Family Physicians (<http://www.aafp.org>).

DEPARTMENT OF HEALTH AND HUMAN SERVICES • CENTERS FOR DISEASE CONTROL AND PREVENTION  
**SAFER • HEALTHIER • PEOPLE™**



# Recommended Immunization Schedule for Persons Aged 0–6 Years—UNITED STATES • 2008

For those who fall behind or start late, see the catch-up schedule

Vaccine ▼	Age ►	Birth	1 month	2 months	4 months	6 months	12 months	15 months	18 months	19–23 months	2–3 years	4–6 years
Hepatitis B <sup>1</sup>		HepB	HepB		<sup>see footnote 1</sup>		HepB					
Rotavirus <sup>2</sup>				Rota	Rota	Rota						
Diphtheria, Tetanus, Pertussis <sup>3</sup>				DTaP	DTaP	DTaP	<sup>see footnote 3</sup>	DTaP				DTaP
<i>Haemophilus influenzae</i> type b <sup>4</sup>				Hib	Hib	Hib <sup>5</sup>		Hib				
Pneumococcal <sup>6</sup>				PCV	PCV	PCV		PCV			PPV	
Inactivated Poliovirus				IPV	IPV			IPV				IPV
Influenza <sup>6</sup>								Influenza (Yearly)				
Measles, Mumps, Rubella <sup>7</sup>								MMR				MMR
Varicella <sup>8</sup>								Varicella				Varicella
Hepatitis A <sup>9</sup>								HepA (2 doses)			HepA Series	
Meningococcal <sup>10</sup>												MCV4

Range of recommended ages  
Certain high-risk groups

This schedule indicates the recommended ages for routine administration of currently licensed childhood vaccines, as of December 1, 2007, for children aged 0 through 6 years. Additional information is available at [www.cdc.gov/vaccines/recs/schedules](http://www.cdc.gov/vaccines/recs/schedules). Any dose not administered at the recommended age should be administered at any subsequent visit, when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and other components of the vaccine are not

contraindicated and if approved by the Food and Drug Administration for that dose of the series. Providers should consult the respective Advisory Committee on Immunization Practices statement for detailed recommendations, including for high risk conditions: <http://www.cdc.gov/vaccines/pubs/ACIP-list.htm>. Clinically significant adverse events that follow immunization should be reported to the Vaccine Adverse Event Reporting System (VAERS). Guidance about how to obtain and complete VAERS form is available at [www.vaers.hhs.gov](http://www.vaers.hhs.gov) or by telephone, 800-822-7967.

## 1. Hepatitis B vaccine (HepB). (Minimum age: birth)

### At birth:

- Administer monovalent HepB to all newborns prior to hospital discharge.
- If mother is hepatitis B surface antigen (HBsAg)-positive, administer HepB and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth.
- If mother's HBsAg status is unknown, administer HepB within 12 hours of birth. Determine the HBsAg status as soon as possible and if HBsAg-positive, administer HBIG (no later than age 1 week).
- If mother is HBsAg-negative, the birth dose can be delayed, in rare cases, with a provider's order and a copy of the mother's negative HBsAg laboratory report in the infant's medical record.

### After the birth dose:

- The HepB series should be completed with either monovalent HepB or a combination vaccine containing HepB. The second dose should be administered at age 1–2 months. The final dose should be administered no earlier than age 24 weeks. Infants born to HBsAg-positive mothers should be tested for HBsAg and antibody to HBsAg after completion of at least 3 doses of a licensed HepB series, at age 9–18 months (generally at the next well-child visit).

### 4-month dose:

- It is permissible to administer 4 doses of HepB when combination vaccines are administered after the birth dose. If monovalent HepB is used for doses after the birth dose, a dose at age 4 months is not needed.

## 2. Rotavirus vaccine (Rota). (Minimum age: 6 weeks)

- Administer the first dose at age 6–12 weeks.
- Do not start the series later than age 12 weeks.
- Administer the final dose in the series by age 32 weeks. Do not administer any dose later than age 32 weeks.
- Data on safety and efficacy outside of these age ranges are insufficient.

## 3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP). (Minimum age: 6 weeks)

- The fourth dose of DTaP may be administered as early as age 12 months, provided 6 months have elapsed since the third dose.
- Administer the final dose in the series at age 4–6 years.

## 4. *Haemophilus influenzae* type b conjugate vaccine (Hib). (Minimum age: 6 weeks)

- If PRP-OMP (PedvaxHIB<sup>®</sup> or ComVax<sup>®</sup> [Merck]) is administered at ages 2 and 4 months, a dose at age 6 months is not required.
- TriHibit<sup>™</sup> (DTaP/Hib) combination products should not be used for primary immunization but can be used as boosters following any Hib vaccine in children age 12 months or older.

## 5. Pneumococcal vaccine. (Minimum age: 6 weeks for pneumococcal conjugate vaccine [PCV]; 2 years for pneumococcal polysaccharide vaccine [PPV])

- Administer one dose of PCV to all healthy children aged 24–59 months having any incomplete schedule.
- Administer PPV to children aged 2 years and older with underlying medical conditions.

## 6. Influenza vaccine. (Minimum age: 6 months for trivalent inactivated influenza vaccine [TIV]; 2 years for live, attenuated influenza vaccine [LAIV])

- Administer annually to children aged 6–59 months and to all close contacts of children aged 0–59 months.
- Administer annually to children 5 years of age and older with certain risk factors, to other persons (including household members) in close contact with persons in groups at higher risk, and to any child whose parents request vaccination.
- For healthy nonpregnant persons (those who do not have underlying medical conditions that predispose them to influenza complications) ages 2–49 years, either LAIV or TIV may be used.
- Children receiving TIV should receive 0.25 mL if age 6–35 mos or 0.5 mL if age 3 years or older.
- Administer 2 doses (separated by 4 weeks or longer) to children younger than 9 years who are receiving influenza vaccine for the first time or who were vaccinated for the first time last season, but only received one dose.

## 7. Measles, mumps, and rubella vaccine (MMR). (Minimum age: 12 months)

- Administer the second dose of MMR at age 4–6 years. MMR may be administered before age 4–6 years, provided 4 weeks or more have elapsed since the first dose.

## 8. Varicella vaccine. (Minimum age: 12 months)

- Administer second dose at age 4–6 years; may be administered 3 months or more after first dose.
- Don't repeat second dose if administered 28 days or more after first dose.

## 9. Hepatitis A vaccine (HepA). (Minimum age: 12 months)

- HepA is recommended for all children aged 1 yr (i.e., aged 12–23 months). The 2 doses in the series should be administered at least 6 months apart.
- Children not fully vaccinated by age 2 years can be vaccinated at subsequent visits.
- HepA is recommended for certain other groups of children, including in areas where vaccination programs target older children.

## 10. Meningococcal vaccine. (Minimum age: 2 years for meningococcal conjugate vaccine [MCV4] and for meningococcal polysaccharide vaccine [MPSV4])

- MCV4 is recommended for children aged 2–10 years with terminal complement deficiencies or anatomic or functional asplenia and certain other high-risk groups. Use of MPSV4 is also acceptable.
- Persons who received MPSV4 3 or more years prior and remain at increased risk for meningococcal disease should be vaccinated with MCV4.

The Recommended Immunization Schedules for Persons Aged 0–18 Years are approved by the Advisory Committee on Immunization Practices ([www.cdc.gov/vaccines/recs/acip](http://www.cdc.gov/vaccines/recs/acip)), the American Academy of Pediatrics (<http://www.aap.org>), and the American Academy of Family Physicians (<http://www.aafp.org>).

DEPARTMENT OF HEALTH AND HUMAN SERVICES • CENTERS FOR DISEASE CONTROL AND PREVENTION • SAFER • HEALTHIER • PEOPLE<sup>™</sup>



## Catch-up Immunization Schedule

UNITED STATES • 2008

### for Persons Aged 4 Months–18 Years Who Start Late or Who Are More Than 1 Month Behind

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age.

CATCH-UP SCHEDULE FOR PERSONS AGED 4 MONTHS–6 YEARS					
Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B <sup>1</sup>	Birth	4 weeks	8 weeks (and 16 weeks after first dose)		
Rotavirus <sup>2</sup>	6 wks	4 weeks	4 weeks		
Diphtheria, Tetanus, Pertussis <sup>3</sup>	6 wks	4 weeks	4 weeks	6 months	6 months <sup>5</sup>
<i>Haemophilus influenzae</i> type b <sup>4</sup>	6 wks	4 weeks if first dose administered at younger than 12 months of age 8 weeks (as final dose) if first dose administered at age 12–14 months No further doses needed if first dose administered at 15 months of age or older	4 weeks <sup>4</sup> if current age is younger than 12 months 8 weeks (as final dose) <sup>4</sup> if current age is 12 months or older and second dose administered at younger than 15 months of age No further doses needed if previous dose administered at age 15 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months–5 years who received 3 doses before age 12 months	
Pneumococcal <sup>5</sup>	6 wks	4 weeks if first dose administered at younger than 12 months of age 8 weeks (as final dose) if first dose administered at age 12 months or older or current age 24–59 months No further doses needed for healthy children if first dose administered at age 24 months or older	4 weeks if current age is younger than 12 months 8 weeks (as final dose) if current age is 12 months or older No further doses needed for healthy children if previous dose administered at age 24 months or older	8 weeks (as final dose) This dose only necessary for children aged 12 months–5 years who received 3 doses before age 12 months	
Inactivated Poliovirus <sup>6</sup>	6 wks	4 weeks	4 weeks	4 weeks <sup>6</sup>	
Measles, Mumps, Rubella <sup>7</sup>	12 mos	4 weeks			
Varicella <sup>8</sup>	12 mos	3 months			
Hepatitis A <sup>9</sup>	12 mos	6 months			
CATCH-UP SCHEDULE FOR PERSONS AGED 7–18 YEARS					
Tetanus, Diphtheria/ Tetanus, Diphtheria, Pertussis <sup>10</sup>	7 yrs <sup>10</sup>	4 weeks	4 weeks if first dose administered at younger than 12 months of age 6 months if first dose administered at age 12 months or older	6 months if first dose administered at younger than 12 months of age	
Human Papillomavirus <sup>11</sup>	9 yrs	4 weeks	12 weeks		
Hepatitis A <sup>9</sup>	12 mos	6 months			
Hepatitis B <sup>1</sup>	Birth	4 weeks	8 weeks (and 16 weeks after first dose)		
Inactivated Poliovirus <sup>6</sup>	6 wks	4 weeks	4 weeks	4 weeks <sup>6</sup>	
Measles, Mumps, Rubella <sup>7</sup>	12 mos	4 weeks			
Varicella <sup>8</sup>	12 mos	4 weeks if first dose administered at age 13 years or older 3 months if first dose administered at younger than 13 years of age			

#### 1. Hepatitis B vaccine (HepB).

- Administer the 3-dose series to those who were not previously vaccinated.
- A 2-dose series of Recombivax HB® is licensed for children aged 11–15 years.

#### 2. Rotavirus vaccine (Rota).

- Do not start the series later than age 12 weeks.
- Administer the final dose in the series by age 32 weeks.
- Do not administer a dose later than age 32 weeks.
- Data on safety and efficacy outside of these age ranges are insufficient.

#### 3. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP).

- The fifth dose is not necessary if the fourth dose was administered at age 4 years or older.
- DTaP is not indicated for persons aged 7 years or older.

#### 4. *Haemophilus influenzae* type b conjugate vaccine (Hib).

- Vaccine is not generally recommended for children aged 5 years or older.
- If current age is younger than 12 months and the first 2 doses were PRP-OMP (Pedvax Hib® or ComVax® [Merck]), the third (and final) dose should be administered at age 12–15 months and at least 8 weeks after the second dose.
- If first dose was administered at age 7–11 months, administer 2 doses separated by 4 weeks plus a booster at age 12–15 months.

#### 5. Pneumococcal conjugate vaccine (PCV).

- Administer one dose of PCV to all healthy children aged 24–59 months having any incomplete schedule.
- For children with underlying medical conditions administer 2 doses of PCV at least 8 weeks apart if previously received less than 3 doses or 1 dose of PCV if previously received 3 doses.

#### 6. Inactivated poliovirus vaccine (IPV).

- For children who received an all-IPV or all-oral poliovirus (OPV) series, a fourth dose is not necessary if third dose was administered at age 4 years or older.

- If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age.
- IPV is not routinely recommended for persons aged 18 years and older.

#### 7. Measles, mumps, and rubella vaccine (MMR).

- The second dose of MMR is recommended routinely at age 4–6 years but may be administered earlier if desired.
- If not previously vaccinated, administer 2 doses of MMR during any visit with 4 or more weeks between the doses.

#### 8. Varicella vaccine.

- The second dose of varicella vaccine is recommended routinely at age 4–6 years but may be administered earlier if desired.
- Do not repeat the second dose in persons younger than 13 years of age if administered 28 or more days after the first dose.

#### 9. Hepatitis A vaccine (HepA).

- HepA is recommended for certain groups of children, including in areas where vaccination programs target older children. See *MMWR* 2006;55(No. RR-7):1–23.

#### 10. Tetanus and diphtheria toxoids vaccine (Td) and tetanus and diphtheria toxoids and acellular pertussis vaccine (Tdap).

- Tdap should be substituted for a single dose of Td in the primary catch-up series or as a booster if age appropriate; use Td for other doses.
- A 5-year interval from the last Td dose is encouraged when Tdap is used as a booster dose. A booster (fourth) dose is needed if any of the previous doses were administered at younger than 12 months of age. Refer to ACIP recommendations for further information. See *MMWR* 2006;55(No. RR-3).

#### 11. Human papillomavirus vaccine (HPV).

- Administer the HPV vaccine series to females at age 13–18 years if not previously vaccinated.

Information about reporting reactions after immunization is available online at <http://www.vaars.kh.gov> or by telephone via the 24-hour national toll-free information line 800-822-7967.

Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for immunization, is available from the National Center for Immunization and Respiratory Diseases at <http://www.cdc.gov/vaccines> or telephone, 800-CDC-INFO (800-232-4636).

DEPARTMENT OF HEALTH AND HUMAN SERVICES • CENTERS FOR DISEASE CONTROL AND PREVENTION • SAFER • HEALTHIER • PEOPLE



[www.numberonehealth.co.uk](http://www.numberonehealth.co.uk) 020 7580 5467

22

## NUMBER ONE HEALTH

Number One Health is a premier London based private health company committed to bringing you the best health care service within central London.

We offer a large range of packages or bespoke one off treatments at locations that make it easy for you to make appointments before, during or after your working day.

Our conveniently based private health centre offers a high level of treatments and services for individuals, companies or executives who want the best and most convenient health treatments they can get.

### OUR SERVICES:



#### Travel Health

- Vaccinations
- Malaria Medication
- Travel health for Aid Workers, Gap year travellers and international organisations



#### Visa Medicals

Number One Health carries out Visa Medicals for several countries including the below:

- Australia
- New Zealand
- Canada
- Saudi Arabia
- China



#### Sexual Healthcare

- Screening for diseases such as HIV, gonorrhoea, chlamydia etc.
- Erectile dysfunction services
- Morning after pill

For further information or to book an appointment please contact:

1 Harley Street, London, W1G 9QD, United Kingdom

Tel: +44 (0)207 580 5467

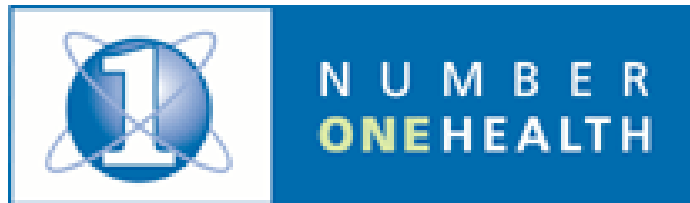
Fax: +44 (0)20 7504 3758

Email: [info@numberonehealth.co.uk](mailto:info@numberonehealth.co.uk)

We are Open from 9am – 6pm Weekdays and 9am – 5pm on Saturdays.

Evening Clinic Tuesdays and Thursdays until 9pm.





Number One for personal health

