Società Italiana di **Pediatria**

SIN Società Italiana di Neonatologia

Protect Your child

It's never too soon

Edited by
Rocco Russo
Massimo Agosti
Rino Agostiniani
Giovanni Corsello
Fabio Mosca
Alberto Villani

LINGUA INGLESE

2ND EDITION

Dear parents,

With this new patient information leaflet, we renew our commitment to not only answer your doubts but also respond to the false or fake news circulated, especially on social media and through new digital technologies.

Over the next few years of your son's or daughter's life, the Pediatrician will be the figure of reference in safeguarding his/her health and will also play a central role in the prevention of a number of infectious diseases that are avoidable through one of the safest and more effective interventions by the Public Health Service: the administration of antibodies and vaccines.

Through this type of prevention, it is possible to achieve two major objectives: not only protecting your child but also providing a protective shield to those who cannot be vaccinated because of particular health conditions and who are therefore more exposed to the risk of contracting given infections or of developing serious forms of disease.

It is precisely the lower incidence of many infectious diseases thus recorded, for example, through the administration of vaccines, that has inevitably led to dimming people's perception of their gravity. Therefore, we must keep clearly in mind that lowering our guard against said infectious diseases will only make it easier to spread them again even more widely.

Being convinced that correct and transparent information must be at the basis of your free and informed decision-making, in case you have doubts or perplexities on the effectiveness, safety and importance of the protection afforded by antibodies and vaccines, we invite you to consult with your Neonatologist or Pediatrician of reference, with the staff at your local Vaccine Center, or visit institutional Internet sites.

May prevention and protection be more successful now than ever!

Società Italiana di **Pediatria**

SIN Società Italiana di Neonatologia

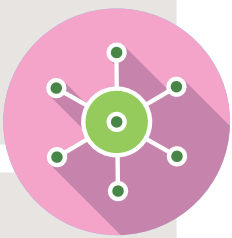
Dear Parents, the following vaccines are scheduled in the age group **from birth to 13-15 months** as follows:

For newborn babies or infants during their first season (october-april) of Respiratory Syncytial Virus (RSV)

- *a dose* of **RSV monoclonal antibody** administered intramuscularly in the baby's thigh.

At the beginning of the 3rd month of life (or from the 61st day of life)

- *First dose* of the **Rotavirus vaccine** administered orally.
- *First dose* of **Hexavalent vaccine** (diphtheria, tetanus, pertussis, poliomyelitis, Hemophilus influenza type B and hepatitis B) via intramuscular injection in the right thigh.
- *First dose* of **Pneumococcal vaccine** via intramuscular injection in the left thigh.



After 30 days (from the 91st day of life)

- *Second dose* of the **Rotavirus vaccine** administered orally.
- *First dose* of the **Meningococcal B vaccine** via intramuscular injection in the right thigh.

N.B. In some Regions, where it is customary to administer four doses of 20-valent pneumococcal conjugate vaccine (PCV20), they offer an additional dose of PCV20 administered intramuscularly in the left thigh.

After 30 days (at the beginning of the 5th month or 121st day of life)

- *Third dose* of the **Rotavirus vaccine *(the one providing for three doses)*** administered orally.
- *Second dose* of **Hexavalent vaccine** (diphtheria, tetanus, pertussis, poliomyelitis, Hemophilus influenzae type B and hepatitis B) via intramuscular injection in the right thigh.
- *Second dose* of **Pneumococcal vaccine** via intramuscular injection in the left thigh.

After 30 days
(at the beginning of the 6th month or 151st day of life)

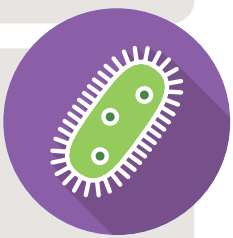
- *Second dose* of the **Meningococcal B vaccine** via intramuscular injection in the right thigh.

At 11 months of life

- *Third dose* of the **Hexavalent vaccine** (diphtheria, tetanus, pertussis, poliomyelitis, Hemophilus influenzae type B and hepatitis B) via intramuscular injection in the right thigh.
- *Third dose* of the **Pneumococcal vaccine** via intramuscular injection in the left thigh.

At 12 months of life

- *First dose* of the **Meningococcal ACWY vaccine** via intramuscular injection in the right thigh.
- *First dose* of the **MPRV vaccine** via intramuscular or subcutaneous injection in the left thigh.

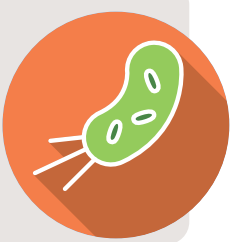


At 13 months of life

- *Third dose* of the **Meningococcal B vaccine** (booster after at least 6 months from the primary series) via intramuscular injection in the right thigh.

Healthy children in the 6 month - 6 year age group included

- **influenza vaccine**: one jab a year; two jabs for previously unvaccinated children according to the recommendations published annually in a circular letter from the Ministry of Health.



Dear Parents, some information on vaccine-preventable infectious diseases affecting children **from birth to 13-15 months of age** will enable you to avoid your child catching:

Respiratory Syncytial Virus (RSV)

The RSV is a highly transmissible virus that, in addition to causing annual epidemics throughout the whole of autumn and winter in temperate climates, represents the primary cause of bronchiolitis and hospitalization in children under one year of age.
This virus spreads from person to person through air particles or droplets released from an infected person when breathing, speaking, coughing, or sneezing, but it can also spread through the respiratory droplets that deposit on surfaces touched by other people who can in turn infect themselves by touching their nose, mouth or eyes with contaminated hands. This transmission mode is common in newborn babies and infants when they touch infected surfaces and toys or put them in their mouth.

Rotavirus

It generally starts with fever and vomiting followed by watery diarrhea after 24-48 hours. The symptoms usually persist for 3-8 days. In the most serious cases, mainly concerning small babies, the patient needs to be hospitalized because of dehydration and the excessive loss of liquids through vomiting, diarrhea and the impossibility to take in liquids orally because of the vomiting. There is no specific therapy for this condition. To fight dehydration, liquids must be administered intravenously or orally where possible.
The oral administration of the rotavirus vaccine consisting of 2 or 3 doses (depending on the vaccine used) is universally recommended for all children starting from their 6th week of life.

Diphtheria

It becomes manifest through rhinopharyngitis or obstructive laryngotracheitis. Severe life-threatening complications are represented by a swollen (bull) neck and airway obstruction produced by membrane formation, and heart failure. The severe form of the disease most often affects people who are unvaccinated or not fully immunized. Immunization with the diphtheria toxoid is the only truly effective countermeasure. The diphtheria vaccine consists of an anti-diphtheria anatoxin, namely the inactivated diphtheria toxin capable of stimulating the organism to defend itself against the disease without being dangerous in any way.

Tetanus

It is caused by a bacterium (Clostridium tetani) that is mainly found in soil, manure, asphalt and in the digestive tract of some animals (cattle, horses, sheep) which eliminate it through their feces. The Tetanus bacterium can survive over long periods of time in unfavorable conditions because it thrives in the form of “spores”, meaning that it wraps itself in a very resistant protective shell.

The Clostridium tetani bacterium may enter the human body also through a common injury and produce a substance (toxin) that strikes the nervous system, causing strong muscle contractions and even death in case the respiratory muscles are affected (respiratory failure).

Pertussis

It is caused by a bacterium (Bordetella pertussis) and it is one of the most contagious diseases known.
The cycle of this infection is particularly severe if it is contracted in the first year of life, as the continuous and prolonged fits of coughing can cause choking. Moreover, at this age, babies can frequently suffer serious complications in their nervous system (encephalopathy), possibly entailing permanent damage caused both by poor blood oxygenation during paroxysmal fits of coughing and by the direct effect of a toxic substance produced by the pertussis bacterium. In some cases, encephalopathy could even lead to the child's death.

Poliomyelitis

Poliomyelitis (in short, polio) is a very serious disease caused by a virus (poliovirus). The disease occurs naturally only in humans through the three known types of poliovirus (serotypes 1, 2 and 3). Serotype 1 is the major cause of paralysis and is the one most frequently responsible for epidemics. The virus is transmitted from person to person through hand contact or with contaminated objects, or through food and water, and thus reaches the nervous system, causing very severe forms of the disease. Small children run a greater risk of contracting the infection. Improved hygiene conditions in our Country have contributed to reducing the spread of many infectious diseases, including poliomyelitis, although this is not sufficient because it is only by vaccinating everybody that we can be sure of protecting people against certain diseases and succeed in completely eliminating epidemics.

Hepatitis B

This infection is caused by a virus that prevalently affects the liver by producing an “inflammation”. The infection is not only transmitted through the blood but also through punctures or wounds caused on contact with objects contaminated with infected blood (syringes or also other commonly used instruments such as nail scissors, razor blades, toothbrushes, etc.) or through contact with blood or other body fluids (sperm and vaginal discharge). Moreover, in pregnancy or delivery, an infected mother can transmit the virus to her child (vertical transmission).

Haemophilus influenzae type b

It is caused by a bacterium that must not be confused with the viruses that cause common flu. This germ is very often present in the nose or throat of “healthy carriers”, namely subjects that carry the germ but do not present any symptom of the disease that it causes. This “b” strain is a very contagious bacterium which, instead of remaining in the nose or throat, can reach the bloodstream and spread to other organs or body parts such as the brain, lungs, bones, etc.
Many of these pathologies require hospitalization and, in children, can cause permanent damage such as: convulsions, deafness, blindness, more or less severe forms of motor paralysis, mental retardation and, in some particularly serious cases, can also lead to death.

Pneumococcal infection

It is caused by a bacterium (the Streptococcus pneumoniae) that is very widespread in nature and whose "family" counts more than 90 components (serotypes), all of which bear the same family name (Streptococcus pneumoniae) but whose individual names are differentiated with a number from 1 to 90.

This bacterium is very often present in the nose or throat of "healthy carriers", namely subjects that carry the germ but do not present any symptom of the disease that it causes.
Among the current 90 pneumococcal serotypes, only a few are capable of provoking serious disease in humans such as bacterial meningitis (inflammation of the membranes that surround the brain), pneumonia or widespread infection throughout the body (sepsis).

Meningococcus B and ACWY

This type of Meningococcal bacteria causes a high incidence of severe complications, which can even lead to death. To date, thirteen types (serogroups) of these Meningococcal bacteria have been identified and labelled with different letters of the alphabet, of which five letter-types A, B, C, Y, and W135, are to blame for the largest number of cases worldwide. Serogroups B and C are those most frequently in circulation in Italy despite the fact that there is a persistently high number of infections reported (approximately 30%) of which it is not possible to know the specific serogroup they belong to.
There are two vaccines that prevent this type of infection: one is specific for the Meningococcal B strain infection and another vaccine is specific for the Meningococcal ACWY strain infection.

Measles

It is caused by a virus and is highly contagious. The disease is transmitted through direct contact with infected respiratory droplets and, less frequently, through airborne transmission. The incubation period is generally between 8-12 days from exposure to the onset of the symptoms which are characterized by: high fever, cough, conjunctivitis and the characteristic skin rash that starts in the face and spreads throughout the whole body (exanthema). Measles can have serious complications, especially in younger children: otitis, bronchopneumonia, laryngotracheitis and diarrhea. In approximately one case out of 1000, the disease affects the nervous system, causing the inflammation of the brain (encephalitis) and provoking permanent damage (deafness, mental retardation) in 40% of the survivors, and can be a cause of death in 3-15% of the cases. At present there is no effective medical therapy to treat the measles, thus making prevention through vaccination the best available instrument of protection.

Parotitis

It is caused by a virus that is transmitted through nose and throat discharge. After coming into contact with an infected subject, the disease's incubation period usually lasts between 16 and 18 days. A subject affected by epidemic parotitis (mumps) is usually already contagious 1-2 days before the swelling of the parotid gland and up to five days following it. This infectious disease usually manifests itself with the swelling of the cheek caused by the tumefaction of the parotid gland and with a mild fever. The swelling can involve both cheeks simultaneously, one cheek only or one cheek first and then the other. Parotitis can be the cause of meningitis in 1 case out of 200. In addition, 20-30% of the males affected by parotitis after puberty develop an inflammation of the testicles (orchitis) which may even cause sterility.

Rubella

After birth, it is caused by a virus that can be transmitted through nasopharyngeal discharge. The incubation period of postnatal rubella goes from 14 to 23 days, on average 16-18 days. The period of maximum contagion appears to fall between a few days prior to the appearance of the skin rash to seven days following it. In 25-50% of cases, the infection is asymptomatic and in the rest of the cases it manifests itself with mild symptoms characterized by a mild fever, generalized swelling of the lymph nodes (especially in the neck) and of the posterior cervical lymph nodes, with a short-lived skin rash.
The highest risk that rubella entails is that of being contracted for the first time by a pregnant woman not vaccinated against the disease. In fact, the virus is extremely dangerous for the fetus and can cause both miscarriage and the birth of a child with serious malformations of the heart, eyes, hearing organs and the brain. There is no known specific therapy against rubella.

Varicella

It is caused by the varicella-zoster (VZV) virus, which is transmitted from an infected person to a healthy person through respiratory droplets or through contact with the blisters on the skin. Varicella is generally a mild disease, but it can also be serious and rarely even deadly, especially if it affects very small children or adults.
The disease usually manifests itself with fever, cough, headache and general malaise, with the onset of a typically itchy skin rash over the whole body, starting from the face and head and spreading to the trunk and to the rest of the body. The skin rash is initially characterized by papules that subsequently transform into blisters (with a liquid content), pustules (containing pus) and scabs. A child could present between 300 and 500 skin lesions throughout the infection.
Varicella can cause pneumonia (in 23 out of 10,000 cases), bacterial superinfection of the pustules, scarring, arthritis, brain damage (more than 1 case out of 10,000), thrombocytopenia and inflammation of the cerebellum capable of causing poor motor coordination (cerebellar ataxia). Complications are most frequent in new-born babies, in adults and in persons with immunodeficiencies.

Influenza

It is an acute respiratory infection that can appear with different levels of severity and, in some cases, can even result in hospitalization and death.
It is caused by seasonal viruses that, in our Country, begin circulating in the autumn, peak in the winter months and subside in the spring and summer.
These viruses are primarily transmitted through airborne saliva droplets spread by coughing or sneezing or through direct and indirect contact with contaminated respiratory secretions. The incubation period of seasonal influenza is normally two days, but it can also range from one to four days. Children and people with a weakened immune system may result to be more contagious and spread the virus over a longer span of time.
Our Ministry of Health considers the category of healthy children in the 6 month-6 years age group to be at high risk of complications and hospitalizations for influenza and recommends seasonal flu shots, providing them free of charge.

National Plan for Vaccine Prevention
PNPV 2023-2025

	2 months	3 months	4 months	5 months	6 months	10 months	12 months	13/14 months	5 years	6 years	11 years	12-18 years	19-59 years	50-64 years	60 years	65 years	66 years and over
Hexavalent vaccine (diphtheria, tetanus, pertussis, poliomyelitis, Hemophilus influenza type B and hepatitis B)	■		■			■											
Rotavirus (RV)	■	■	■														
Pneumococcal Conjugate (PCV)	■		■			■										■	■
Meningococcal B (MenB)	■	■	■					■									
Measles-Mumps-Rubella-Varicella (MMRV or MMR+V)							■		■								
ACWY Meningococcal vaccine (MenACWY)							■					■					
Diphtheria, Tetanus, Pertussis, Polio (DTap-IPV/dTap-IPV)									■			■					
Papillomavirus (HPV)											■						
Diphtheria-Tetanus-Pertussis, adult formula (dTaP)													■	■	■	■	■
Influenza (FLU)					■	■	■	■	■	■					■	■	■
Herpes Zoster (HZV)																■	■

■ Vaccination recommended by age.

Nota Bene: the age refers to the age in completed months or years. Example: the first dose of DTaP-IPV-HBV-Hib may be given after the 2nd completed month of age or the 61st day of life; the DTaP-IPV-HBV-Hib booster at 10 months of age, or after the 301st of life, etc.

Rotavirus = vaccine against the rotavirus

PCV = pneumococcal conjugate vaccine

IPV = Inactivated Polio Vaccine

MenB = vaccine against the meningococcal B disease

MMRV = quadrivalent vaccine against measles-mumps-rubella-varicella (chickenpox)

MMR = trivalent vaccine against measles-mumps-rubella

V = vaccine against varicella

MenACWY = Conjugate vaccine against ACWY meningococcal bacteria

Hep B = vaccine against the Hepatitis B virus

Hib = vaccine against the invasive infections from Haemophilus influenzae type b

DTaP = vaccine against Diphtheria-Tetanus-acellular Pertussis

Tdap = vaccine against Diphtheria-Tetanus-acellular Pertussis, adult formula

DTaP-iPV = vaccine against Diphtheria-Tetanus-acellular Pertussis-Polio, paediatric formula

DTaP-IPV = inactivated vaccine against Diphtheria-Tetanus-acellular Pertussis-Polio, adult formula

HPV = vaccine against the papillomavirus

Influenza = vaccine against seasonal influenza

HZ = Vaccine against Herpes Zoster

Richiesto il patrocinio del

Ministero della Salute

Vaccines work!

Società Italiana di **Pediatria**

www.sip.it

SIN Società Italiana di Neonatologia

www.sin-neonatologia.it