

Keep for
Reference

Guide to Vaccinations for Children

Issued October 2020



We are surrounded by a wide variety of infectious diseases caused by bacteria and viruses. In order to prevent contraction of these diseases, it is important to establish resistance (immunity) to infection through vaccinations.

We urge you to read through this vaccination guide and make sure you understand its contents before having your child receive any vaccination.

◆ Notice Regarding Vaccination Procedures ◆

Haemophilus influenzae type B (Hib) vaccination, pediatric pneumococcal vaccination and others are possible once your child has reached the age of 2 months, and the DPT-IPV (diphtheria, pertussis, tetanus and polio) vaccine and others are possible once your child has reached the age of 3 months.

Consult with your family doctor to create a vaccination schedule and proceed with vaccinations in a planned manner.

Your child can receive the BCG vaccine up until s/he reaches the age of 1 year. Please make sure that your child receives this vaccine, as it protects against tuberculosis.

Additionally, give first priority to measles and rubella vaccinations once your child has reached the age of 1 year. Measles is highly contagious and severe complications can arise following its onset, making it an extremely hard disease on children. In particular, children involved in regular group activities should be vaccinated as early as possible.



Yokohama City Health and Social Welfare Bureau

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◆ Pre-vaccination Checklist ◆

1. Is your child currently in a state of good physical health?
2. Do you understand the necessity, effects and side effects of the vaccine your child will receive today as well as other relevant factors? If there is anything that you do not understand, write your questions down on a piece of paper.
3. Do you have your Maternal and Child Health Handbook (*Boshi Kenko Techo*) with you?
4. Have you completed the pre-vaccination medical questionnaire (*yoshin-hyo*)?

You're ready to move on to the vaccination!

1 What is Vaccination?

We are surrounded by a wide variety of infectious diseases caused by bacteria and viruses. By creating vaccines with weakened toxins from bacteria and viruses that cause infection and inoculating them in the body, it is possible to establish resistance (immunity) to the diseases. This is known as preventative inoculation, or vaccination.

The purpose of vaccination is not only the protection of individuals from infectious diseases, but also the promotion of increased resistance (immunity) throughout society as a whole via individual vaccinations, thus reducing the presence of the infectious diseases. Some people believe that vaccination is not necessary at times when a certain disease is not prevalent in society; however, such suppression of the disease has been achieved through cultivation of resistance (immunity) by individual members of society.

◆ Infectious Diseases ◆

Microorganisms such as viruses and germs enter the body and proliferate, resulting in disease. Various symptoms occur depending on the type of microorganism, including fever, coughing and headaches.

2 Proper Timing for Vaccinations

Some people worry about the side effects of vaccinations. However, if your child does not receive vaccinations and is infected with a disease as a result, severe symptoms may follow and disability may remain even after successful treatment of the disease, which will give rise to even greater worries.

Although vaccines used in Japan have minimal side effects, each of our bodies is different and side effects may vary in each person's case.

If you are even slightly worried about anything related to a vaccination or are unsure of whether or not your child should receive it, please consult with your family doctor and allow your child to receive the vaccination only after you feel sufficiently comfortable and informed about the situation.

◆ Side Effects ◆

In addition to the establishment of immunity, allergic reactions and other symptoms may occur following vaccination. These are known as side effects or reactions. If your child exhibits any symptom following vaccination that is cause for worry, please consult with the doctor who performed the vaccination or with your family doctor as soon as possible. Information on side effects by vaccination type is available starting on p. 7.

3 Vaccinations in Yokohama City

As a rule, Yokohama performs vaccinations, known as "routine vaccinations," as specified in the Preventive Vaccination Law.

Persons that fall within the eligible age ranges as outlined on pp. 2–3 can receive vaccinations free of charge (*1) (*2). When taking your child to receive a vaccination, bring your Maternal and Child Health Handbook (*Boshi Kenko Techo*), (*2) your booklet of vaccination coupons (*yobo-sesshu yoshin-hyo tsuzuri*), and the pre-vaccination medical questionnaire (*yoshin-hyo*) that also serves as a vaccination voucher (*sesshu-ken*) and is mailed to you directly.

Vaccinations not defined as routine vaccinations are considered voluntary, and you will be responsible for costs incurred.

(*1) As of January 30, 2013, any person who was not able to receive a routine vaccination during his/her period of eligibility due to an illness or condition requiring long-term medical treatment may instead receive free vaccinations during the two-year period following the day s/he became able to receive vaccinations again. For detailed information on procedures and other such information, consult with your local ward office's Health Promotion Section. **If the person has surpassed the eligible age to receive a vaccination, that person may be eligible to receive public funds to cover the cost of vaccination. To check eligibility, please consult promptly with your local ward office's Health Promotion Section (refer to p. 25) in order to receive vaccination at the earliest possible date.**

(*2) The vaccine for human papillomavirus infections is still being offered as a routine vaccination. However, it is not included because we are refraining from actively promoting it per recommendations from the Ministry of Health, Labour and Welfare.

For details, refer to "Vaccinations for Cervical Cancer" on the Yokohama City homepage.

(<https://www.city.yokohama.lg.jp/kurashi/kenko-iryo/yobosesshu/yobosesshu/hpv.html>)

(*3) If you lose your Maternal and Child Health Handbook after your child has enrolled in junior high school, a new handbook will not be reissued. If you do not have your handbook when visiting a medical institution that performs vaccinations, please provide an oral explanation of your child's vaccination history and consult with staff prior to receipt of vaccination.

◆ Overview of Routine Vaccinations

Immunizations are performed at medical institutions included in the List of Yokohama City Medical Institutions Performing Vaccinations, which is available at your local ward office's Health Promotion Section.

Vaccination Type	Disease (s) Prevented	Recommended Age Ranges for Vaccination (Standard Vaccination Ages) and Vaccination Method		Availability Period and Facility Administering Vaccine	Ages of Eligibility for Free Vaccination (Eligible Vaccination Age Ranges)	Vaccination Completion		
						No. of Inoculations	Make a mark when vaccination is complete	
Hib *1	Meningitis, acute epiglottitis and others caused by Hib	Initial	2 to 6 months after birth, 3 times at intervals of 27 to 56 days and completed before the age of 12 months	Throughout the year Participating medical institutions in Yokohama City	2 to 59 months after birth (before reaching age 5)	4		
		Booster	1 time 7 to 13 months after completion of initial inoculations					
Pediatric pneumococcal *1	Pneumonia, meningitis, otitis media (inflammation of the inner ear) and others caused by pneumococci	Initial	2 to 6 months after birth, 3 times at intervals of 27 days or more and completed before the age of 12 months			2 to 59 months after birth (before reaching age 5)	4	
		Booster	1 time 12 to 15 months after birth and 60 days or more after completion of initial inoculations					
Hepatitis B *2	Hepatitis B	1st, 2nd	2 and 3 months after birth, 2 times at intervals of 27 days or more			Before reaching age 1 (Children born on April 1, 2016 or later are eligible)	3	
		3rd	1 time at least 139 days after completion of the first inoculation (at an age of 7 to 8 months)					
Rotavirus	Rotavirus gastroenteritis		From 2 months after birth to 14 weeks and 6 days after birth			- Rotarix (RV1) From 6 weeks and 0 days after birth to 24 weeks and 0 day after birth	2	
			- Rotarix (RV1) 1 time at least 27 days after the initial inoculation (By 24 weeks and 0 days after birth) - RotaTeq (RV5) 2 time at least 27 days after the initial inoculation (By 32 weeks and 0 days after birth)			- RotaTeq (RV5) From 6 weeks and 0 days after birth to 32 weeks and 0 day after birth	3	
DPT-IPV *3	Diphtheria, tetanus, pertussis (whooping cough) and polio	Stage 1 initial	3 to 12 months after birth, 3 times at intervals of 20 to 56 days			3 to 89 months after birth (before reaching 7 and a half years of age)	4	
		Stage 1 booster	1 time 12 to 18 months after completion of initial inoculations					
BCG	Tuberculosis (BCG)		From 5 to 7 months after birth, 1 time		Before reaching age 1	1		
Measles-rubella (MR)	Measles and rubella	Stage 1	12 to 23 months after birth, 1 time		12 to 23 months after birth	2		
		Stage 2	From age 5 up until (but not including) age 7, between Apr. 1 a year before the child enters elementary school and Mar. 31 of the year the child enters elementary school, 1 time		From age 5 up until (but not including) age 7, between Apr. 1 a year before the child enters elementary school and Mar. 31 of the year the child enters elementary school			
Chickenpox	Chickenpox	Initial	12 to 14 months after birth, 1 time		12 to 35 months after birth (age 1-2)	2		
		Booster	1 time 6 to 12 months after completion of the initial inoculation					
Japanese encephalitis *4	Japanese encephalitis	Stage 1 initial	At age 3, 2 times at 6 to 28 day intervals		6 to 89 months after birth (before reaching 7 and a half years of age) (children under age 3 receive half doses)	4		
		Stage 1 booster	1 time at age 4 (approx. 1 year after completion of initial inoculations)					
		Stage 2	1 time at age 9					
DT	Diphtheria and tetanus	Stage 2	1 time at age 11		From age 11 up until (but not including) age 13	1		

*1 Hib and pediatric pneumococcal vaccinations:

The inoculation method varies depending on the age at which the child's vaccinations were initiated.

(Refer to pp. 9-10 for information on inoculation methods following non-standard schedules.)

<Standard schedule> 2 to 6 months after birth

- **Hib:** Inoculation 3 times at intervals of 27-56 days (20-day intervals are possible if the doctor deems it necessary), followed by 1 additional inoculation 7-13 months after the 3rd dose.

* The initial 2nd and 3rd inoculations are administered before the child reaches the age of 12 months. (If the child has surpassed 12 months of age without receiving these inoculations, the second and third will not be administered; rather, only the additional inoculation will be administered 27 days or more after the previous inoculation.)

- **Pediatric pneumococcal:**

Inoculation 3 times at intervals of 27 days or more, followed by 1 additional inoculation 60 days or more after the 3rd dose once the child has reached the age of 12 months. (the additional inoculation is usually administered when the child is between 12 and 15 months of age)

* The initial 2nd and 3rd inoculations are administered before the child reaches the age of 24 months. (If the child has surpassed 24 months of age without receiving these inoculations, the second and third will not be administered; rather, only the additional inoculation will be administered.) Additionally, if the second inoculation is administered after the child has surpassed 12 months of age, the third inoculation will not be administered; rather, only the additional inoculation will be administered.

*2 Hepatitis B vaccinations:

* About half a year is required from the initial inoculation to finish all three inoculations (refer to p. 11 for information on vaccination method).

* Children born from an HBsAg-positive mother who are receiving hepatitis B vaccinations as an infection prevention measure (to prevent infection from mother to child) are not eligible to receive this vaccine as part of routine vaccinations. Such persons should continue receiving vaccinations using health insurance.

① Recommended Age Ranges for Vaccination
(Standard vaccination age ranges; circled numbers indicate dosage number)

Ages of Eligibility for Free Vaccination
(Eligible ages according to law)

Vaccination Type		Age		After birth:																					
		2 mo.	3 mo.	5 mo.	6 mo.	8 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.
Hib *1	Initial	①②③																			Note: Number of inoculations varies depending on the age at which they are started. (Refer to p. 9 for information on non-standard schedule inoculation.)				
	Booster	④																							
Pediatric pneumococcal *1	Initial	①②③																			Note: Number of inoculations varies depending on the age at which they are started. (Refer to p. 10 for information on non-standard schedule inoculation.)				
	Booster	④																							
Hepatitis B *2	1st, 2nd	①②																			Note: About half a year is required from the first inoculation to finish all three inoculations.				
	3rd	③																							
Rotavirus	[Rotarix (RV1)]	① ②																							
	[RotaTeq (RV5)]	① ②③																							
DPT-IPV *3	Stage 1 initial	①②③																							
	Stage 1 booster	④																							
BCG		①																							
Measles-rubella (MR)	Stage 1	①																			★ Please complete vaccination after the child has reached age 5 but before s/he has reached 7, between Apr. 1 a year before s/he enters elementary school and Mar. 31 of the year s/he enters elementary school.				
	Stage 2	★①																							
Chickenpox	Initial	①																							
	Booster	②																							
Japanese encephalitis *4	Stage 1 initial	①②																							
	Stage 1 booster	③																							
	Stage 2	①																							
DT		①																							

***3 DPT-IPV vaccinations:**

DPT-IPV vaccinations are being administered as of November 1, 2012. This vaccine includes inactivated polio vaccine (IPV) (★) as well as protection against the three diseases covered under the previous DPT vaccine.

Children who have already started DPT vaccination can receive DPT-IPV vaccinations for their remaining inoculations.

(★) Regarding the inactivated polio vaccine (IPV), those who have completed DPT vaccination but have not completed polio vaccination will receive this DPT-IPV vaccine.

***4 Japanese encephalitis vaccination:**

Response following cessation of active encouragement of vaccination:

Starting in May 2005, the government temporarily ceased active encouragement of Japanese encephalitis vaccinations, but has resumed active encouragement since April 2010 following the development of a new vaccine.

Currently, a remedial measure is in effect that, as of October 1, 2016, expands eligibility **up to (but not including) age 20** for persons who had not completed vaccination and were born between April 2, 2000 and April 1, 2007.

In addition, persons born between April 2, 2007 and October 1, 2009 who are currently receiving stage II inoculations are eligible to receive stage I inoculations they may have missed. (Refer to pp. 19–20 for details.)

[Precautions Regarding Japanese Encephalitis Vaccination]

- The target age ranges for active encouragement of vaccination by the national government is expected to change again in the future.
- Inoculation methods may vary from the standard method among persons eligible for remedial measures depending on individual vaccination history. Please contact the Yokohama City Vaccination Call Center before receiving vaccination. (contact information is listed on p. 26).
- As of October 1, 2016, persons who were born between April 2, 2000 and April 1, 2007 or between April 2, 2007 and October 1, 2009 are not eligible for remedial measures.

4 Precautions Prior to Vaccination

(1) Persons Who Cannot Receive Vaccinations

The following types of children may not receive vaccinations:

1. Children who have an obvious fever (37.5°C/99.5°F or higher)
2. Children who are suffering from an acute condition/illness
3. Children who have suffered from anaphylaxis in the past as a reaction to any component of the vaccine liquid to be used
4. In the case of a live vaccine, children whose immune function is abnormal due to disease/condition or who is undergoing immunosuppressive medical treatment (live vaccines: refer to p. 8)
5. In the case of the BCG vaccine:
 - Children who exhibit a keloid(s) resulting from vaccination, external scarring, etc.
 - Children who have been treated for tuberculosis
6. In the case of the rotavirus vaccine
 - Children who have untreated congenital gastrointestinal tract disorders
 - Children who have had intussusception
 - Children who have severe combined immunodeficiency (SCID)
7. Children whose condition has otherwise been deemed unsuitable for vaccination by a doctor

◆ Anaphylaxis ◆

Anaphylaxis is a serious allergic reaction that usually occurs within 30 minutes of vaccination.

In addition to profuse sweating, sudden swelling of the face and appearance of hives all over the body, nausea, vomiting, loss of voice, breathing difficulty and other such symptoms continue to appear as the entire body undergoes a severe reaction and enters a state of shock.

(2) Persons Who Should Exercise Caution When Receiving Vaccinations

The following persons should be examined by their family doctor in advance to determine whether they can receive a vaccination. In addition, persons receiving a vaccination should have it administered by their family doctor or, when necessary, receive the vaccination at a separate medical institution following a consultation with their family doctor. When receiving a vaccination, make sure to confirm whether or not the administering facility is on the list of designated medical facilities participating in vaccinations.

1. **Children who are receiving medical treatment for heart, kidney and/or liver problems; a blood disease; a developmental disorder; or other such condition**
2. **Children who have suffered from fever within two days of vaccination or rash, hives, or any other possible allergic reaction following vaccination**
3. **Children who have experienced seizure (convulsions) in the past**
Conditions vary for individual vaccines depending on the age at which the child experienced seizure (convulsions), the child's body temperature at that time, and whether or not the child experienced seizures (convulsions) after that. Make sure to consult with your family doctor in advance.
4. **Children who have been diagnosed with immunodeficiency in the past or whose close relative(s) suffer from congenital immunodeficiency**
5. **Children who have been told they have an allergy to eggs (which are used in the culturing process of vaccine production), antibiotics, sedatives, etc.**
6. **Children who may have an allergic reaction to any component of the vaccine or toxoid**
7. **In the case of the BCG vaccine, children who may have been infected with tuberculosis in the past through long-term contact with a tuberculosis patient or other such circumstances**

(3) General Precautions

As a rule, children should receive vaccinations only when they are in a good state of health. We ask that parents/guardians pay close attention to their child's physical condition, health and other such factors on a daily basis. If anything you notice concerns you, please consult with your family doctor, the Health and Welfare Center or other such resource prior to vaccination.

1. Before the Day of Vaccination

- (a) Make sure you fully understand the necessity, side effects and other factors relevant to the vaccine (refer to information from p. 9 onward). If there is anything you do not understand, please contact the doctor who will administer the vaccine in advance.
- (b) If the child who will receive the vaccine has ever experienced an allergic reaction or other adverse effect following a past inoculation, has experienced seizure in the past or has an underlying medical condition, please consult with your family doctor in advance.
- (c) Please contact the administering medical institution ahead of time regarding the vaccination date and other such details.
- (d) Please consult with your local ward office's Health Promotion Section (refer to p. 21) in advance if you would like your child to receive a vaccination in a municipality other than Yokohama City.

Persons to whom the following apply and who receive a routine vaccination outside of Yokohama City are eligible to receive a refund payment for vaccination-related costs (reimbursement) following completion of necessary procedures in advance. (Repayment will be made about 2–3 months after application.)

- Persons currently residing outside of Yokohama City due to a temporary return to a parent's home to give birth (*sato-gaeri shussan*)
- Patients currently being hospitalized outside of Yokohama City

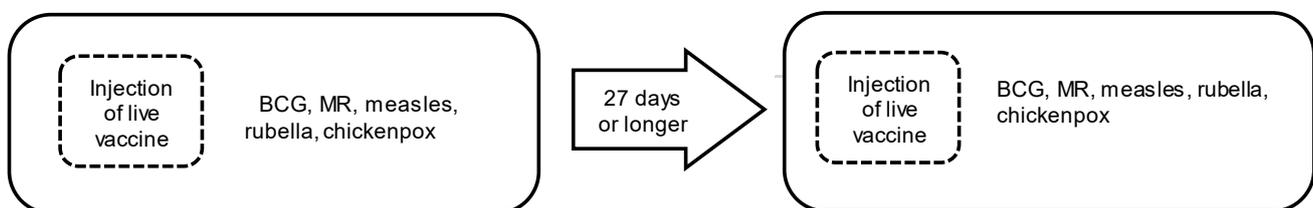
2. On the Day of Vaccination

- (a) Keep a close eye on your child's health from the morning onward and make sure that nothing appears to be out of the ordinary. Even if you have scheduled a vaccination time in advance, consult with your family doctor if your child appears to be in poor health in order to decide whether to proceed with the vaccination.
- (b) Take your child's temperature at home to make sure that s/he has a normal body temperature. Even if the child's health seems only slightly worse than usual, reschedule the vaccination for a later date.
- (c) A parent/guardian who is very familiar with the child's daily health conditions should come to the medical institution together with the child on the day of vaccination.
- (d) The pre-vaccination medical questionnaire (*yoshin-hyo*) provides valuable information for the doctor administering the vaccine. Please take full responsibility for filling it out in detail, particularly the sections regarding recent vaccinations, allergies, etc.
- (e) Bring your Maternal and Child Health Handbook (*Boshi Kenko Techo*) and the pre-vaccination medical questionnaire (*yoshin-hyo*) that also serves as a vaccination voucher (*sesshu-ken*).

3. Other Precautions

- (a) On rare occasions, side effects may occur following inoculation. If your child experiences any health-related problems, take your child in for immediate examination by the doctor who administered the vaccine or other relevant doctor.
- (b) In order to ensure safe and effective immunization, at least a 27-day interval is required in the case of live vaccines administered by injection.

Example: an interval of "27 days or more until the next inoculation" for an inoculation performed on the 1st of the month (Monday) means that the next inoculation can be received starting on the 29th (the next Monday).



*1 Please take note that each inoculation in series for each type of vaccine has its own specified interval.

*2 If deemed necessary by the doctor, more than one type of vaccine may be administered at the same time (at different locations on the body). Please consult with the doctor in charge of vaccination before proceeding with simultaneous inoculations.

- (c) If your child has an infectious disease, wait for his/her entire body to recover fully before vaccination. The following are recommended intervals between recovery and vaccination in order to ensure that the child's immune state has been fully restored. Please consult in advance with the doctor administering the vaccination, who will make the final decision in this matter.

Disease		Interval
Exanthem subitem (roseola infantum); hand, foot and mouth disease; erythema infectiosum (fifth disease), etc.	⇒	approx. 1 to 2 weeks after recovery
Rubella, chickenpox, mumps (epidemic parotitis), etc.	⇒	approx. 2 to 4 weeks after recovery
Measles	⇒	approx. 4 weeks after recovery

5 Precautions Following Vaccination

(1) General Precautions

- a. Have the child monitored at the medical institution or ensure that a doctor can be contacted immediately for 30 minutes following the inoculation. Sudden side effects in reaction to the vaccination sometimes occur during this period.
- b. Keep an eye out for potential side effects of vaccination for four weeks following inoculation when using a live vaccine (measles-rubella (MR), measles, rubella, BCG, chickenpox, hepatitis B, etc.) and one week following inoculation when using an inactivated vaccine (DPT-IPV, DPT, DT, polio, Japanese encephalitis, Hib, pediatric pneumococcal, etc.).
- c. Keep the injection site clean. Although bathing is permitted following vaccination, make sure to avoid scrubbing or rubbing the injection site.
- d. Avoid strenuous exercise on the day of vaccination.
- e. If any unusual reaction occurs near the injection site or the child's physical condition changes in any way, have the child examined by a doctor immediately.

(2) Common Symptoms that May Occur Following Inoculation

On rare occasions, the following types of side effects may occur following inoculation. Although these are usually not cause for alarm, the child should be taken to a doctor for examination immediately if symptoms are unusually severe and/or unlisted symptoms appear.

For more detailed information on vaccination side effects, refer to **chapter 8, “Infectious Diseases with Vaccines and Vaccination Side Effects”** on p. 9 - p. 20.

Vaccine name	Overview of Possible Side Effects Following Inoculation
Hib	The most common side effects following inoculation include the development of symptoms at the injection site (reddening, induration (hardening and stiffening), swelling, pain, etc.) and fever. These symptoms normally dissipate in several days.
Pediatric pneumococcal	The most common side effects following inoculation include the development of symptoms at the injection site (reddening, swelling, pain, etc.) and fever. These symptoms normally dissipate in several days.
Hepatitis B	The most common side effects following inoculation include development of symptoms at the injection site (reddening, induration (hardening and stiffening), swelling, pain, etc.) and fever. These symptoms normally dissipate in several days.
DPT-IPV DT	The most common side effects following inoculation include the development of symptoms at the injection site (reddening, induration (hardening and stiffening), swelling, pain, etc.) and fever. These symptoms normally dissipate in several days. Induration (hardening and stiffening) of the injection site will decrease over time but may persist for multiple months.
IPV	The most common side effects following inoculation include the development of symptoms at the injection site (reddening, swelling, pain, etc.) and fever. These symptoms normally dissipate in several days.
Japanese encephalitis	The most common side effects following inoculation include the development of symptoms at the injection site (reddening, swelling, pain, etc.) and fever. These symptoms normally dissipate in several days.
BCG	Minimal amounts of redness, swelling/spots, and pus may appear 10 days after inoculation at the injection site (symptoms are strongest the first month after inoculation). Scabs will form afterward, and they will heal naturally in about 3 months, leaving a small scar from the injection.
Measles-rubella (MR)	Fever, rash, redness around the injection site, nasal discharge, coughing and other such symptoms may appear 5–14 days after inoculation, but these symptoms normally dissipate in several days.
Chickenpox (varicella)	Although it is rare to see side effects with these vaccines, fever and rash sometimes occur, and on rare occasions reddening, swelling, induration (hardening and stiffening) have been observed.

6 Types of Vaccines and Their Characteristics

Three types of vaccines are available.

(1) Live vaccines

Applicable vaccine types: measles-rubella (MR), measles, rubella, BCG, chickenpox, Rotavirus vaccine, etc.

Live vaccines contain bacteria or viruses whose virulent properties have been greatly weakened (attenuated). Inoculation using these microorganisms results in the development of the same level of resistance (immunity) in the body as if the disease had been contracted naturally.

Proliferation of the weakened bacteria or virus in the body following inoculation may result in fever, rash and other mild symptoms depending on the properties of the vaccine used. It takes approximately one month for sufficient disease resistance to be established.

(2) Inactivated vaccines

Applicable vaccine types: DPT-IPV vaccine, pertussis (whooping cough); polio; freeze-dried, cell culture–derived Japanese encephalitis; Hib; pediatric pneumococcal; hepatitis B; others

In inactive vaccines, bacteria and viruses are killed, the necessary parts for establishing resistance extracted and their virulence eliminated. Bacteria and viruses do not multiply inside the body, so multiple inoculations are administered to establish resistance: vaccination is performed two or three times at fixed intervals, and once the minimum required resistance has been established, a booster is given approximately one year later to ensure sufficient resistance.

However, because the body's resistance weakens over time, additional boosters must be given at predetermined intervals (dependent on the properties of the vaccine used) in order to maintain long-term resistance.

(3) Toxoids

Applicable toxoid types: diphtheria, tetanus

In toxoids, the toxic compounds created by the bacteria are removed to eliminate the bacteria's toxicity. Much like an inactivated vaccine, a toxoid is usually administered multiple times in order to establish sufficient resistance.

7 Vaccine Effectiveness

Although the purpose of vaccination is to prevent certain diseases, resistance may not be established due to the physical constitution and/or current health of the child receiving the vaccine. It is possible to have blood drawn in order to measure antibodies contained therein as a way of testing whether or not resistance has been sufficiently established (you will be responsible for relevant expenses).

8 Infectious Diseases with Vaccines and Vaccination Side Effects

Haemophilus influenzae type B (Hib)

a. Explanation of Disease

Haemophilus influenzae, particularly type B (Hib), is a cause of system infection and can trigger problems including otitis media (inflammation of the inner ear), sinusitis and bronchitis, as well as more severe problems such as meningitis, sepsis, epiglottitis and pneumonia. Before 2010, meningitis caused by Hib occurred in 7.1–8.3 of every 100,000 children under 5 years of age, meaning that it occurred in approximately 400 children per year throughout Japan, and it carried a poor prognosis in an estimated 11% of cases.* A majority of such cases were infants between 4 months and 1 year of age.

* Data source: materials from the Vaccinations Group, Infectious Diseases Subcommittee, Health Sciences Council.

b. Vaccination Method

The Hib vaccine is administered as follows depending on when initial inoculation is started. Method 1 is the standard approach.

① Standard vaccination schedule

If inoculations are started 2 to 6 months after birth

Inoculation 3 times at intervals of 27–56 days (20-day intervals are possible if the doctor deems it necessary), followed by 1 additional inoculation 7–13 months after the 3rd dose.

* The initial 2nd and 3rd inoculations are administered before the child reaches the age of 12 months.

(If the child has surpassed 12 months of age without receiving these inoculations, the second and third will not be administered; rather, only the additional inoculation will be administered 27 days or more after the previous inoculation.)

② Non-standard schedules

(a) If inoculations are started 7 to 11 months after birth

Inoculation 2 times at intervals of 27–56 days (20-day intervals are possible if the doctor deems it necessary), followed by 1 additional inoculation 7–13 months after the 2nd dose.

* The initial 2nd inoculation is administered before the child reaches the age of 12 months.

(If the child has surpassed 12 months of age without receiving these inoculations, the second and third will not be administered; rather, only the additional inoculation will be administered 27 days or more after the previous inoculation.)

(b) If inoculations are started from 12 months after birth up until (but not including) age 5

One-time inoculation. (The pre-vaccination medical questionnaire (*yoshin-hyo*) is used for the initial 1st inoculation.)

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

Vaccination Type	After birth:																											
	2 mo.	3 mo.	5 mo.	6 mo.	8 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.	19 yr.	20 yr.		
Hib	①②③																											

Note: Number of inoculations varies depending on the age at which they are started. (Refer to method outlined above regarding inoculations following non-standard schedules.)

c. Vaccine Side Effects

Confirmed side effects include mostly localized reactions such as redness, swelling, induration (hardness and swelling) and pain at the injection site, as well as systemic reactions such as irritability / ill temper, difficulty sleeping, loss of appetite, diarrhea and fever.

Pneumococcus infections

a. Explanation of Disease

Pneumococci are one of the two major causes of infectious disease in children. Many children carry these bacteria deep inside their noses, sometimes resulting in bacterial meningitis, bacteremia, pneumonia, sinusitis, otitis media (inflammation of the inner ear), etc.

The case rate of purulent meningitis caused by pneumococci among children under 5 years of age is 2.6–2.9 out of 100,000 persons, resulting in an estimated occurrence rate of 150 children per year (*). The mortality rate and occurrence of sequela (aftereffects such as hydrocephalus, hearing impairment and intellectual disability) are higher than with meningitis brought about by Hib, with a poor prognosis in 21% of cases. * Data source: materials from the Vaccinations Group, Infectious Diseases Subcommittee, Health Sciences Council.

b. Vaccination Method*

The pediatric pneumococcal vaccine is administered as follows depending on when initial inoculation is started. Method ① below is the standard approach.

① Standard vaccination schedule

If inoculations are started 2 to 6 months after birth

Inoculation 3 times at intervals of 27 days or more, followed by 1 additional inoculation 60 days or more after the 3rd dose once the child has reached the age of 12 months (the additional inoculation is usually administered when the child is between 12 and 15 months of age).

- * The initial 2nd and 3rd inoculations are administered before the child reaches the age of 24 months. (If the child has surpassed 24 months of age without receiving these inoculations, only the additional inoculation will be administered.) Additionally, if the second inoculation is administered after the child has surpassed 12 months of age, the third inoculation will not be administered; rather, only the additional inoculation will be administered.

② Non-standard schedules

(a) Inoculation starting 7 to 11 months after birth

Inoculation 2 times at intervals of 27 days or more, followed by 1 additional inoculation 60 days or more after the 2nd dose and once the child has reached 12 months of age.

- * The initial 2nd inoculations are administered before the child reaches the age of 24 months. (If the child has surpassed 24 months of age without receiving these inoculations, only the additional inoculation will be administered.)

(b) If inoculations are started 12 to 23 months after birth

Inoculation 2 times at intervals of 60 days or more. (The pre-vaccination medical questionnaire (yoshin-hyo) is used for the initial 1st and 2nd inoculations.)

(c) If inoculations are started from 24 months after birth up until (but not including) age 5

One-time inoculation. (The pre-vaccination medical questionnaire (yoshin-hyo) is used for the initial 1st inoculation.)

- * As of November 1, 2013, the previous 7-valent pediatric pneumococcal vaccine (7-valent pneumococcal conjugate vaccine, or PCV7) was replaced by the current the current 13-valent vaccine (13-valent pneumococcal conjugate vaccine, or PCV13) in order to immunize against 6 additional types of pneumococci.

PCV13 is the only vaccine type that can be used in routine vaccinations as of November 11, and persons who have already begun vaccinations using PCV7 will complete their remaining doses using PCV13.

Person who have already finished their scheduled doses using PCV7 are requested to increase resistance to the remaining six types of pneumococci by receiving 1 dose of PCV13 eight weeks or more after completing their PCV7 vaccinations.

Although this immunization is optional, it is recommended in order to more reliably prevent contraction of disease.

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

Vaccination Type	Recommended Age Ranges for Vaccination (Standard vaccination age ranges; circled numbers indicate dosage number)																			Ages of Eligibility for Free Vaccination (Eligible ages according to law)										
	After birth:																													
Age	2 mo.	3 mo.	5 mo.	6 mo.	8 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.	19 yr.	20 yr.				
Pediatric pneumococcal	①	②	③																											

Note: Number of inoculations varies depending on the age at which they are started. (Refer to method outlined above regarding inoculations following non-standard schedules.)

c. Vaccine Side Effects

Side effects include redness, swelling, induration (hardness and swelling) and pain at the injection site, as well as fever.

Hepatitis B

a. Explanation of Disease

Some persons infected with the hepatitis B virus (HBV) may develop acute hepatitis but later recover, whereas others may develop chronic hepatitis. A small portion of infected persons may develop the more severe fulminant hepatic failure, which can lead to death. It is also possible for the virus to remain in the liver without exhibiting clear symptoms and develop years later into chronic hepatitis, liver cirrhosis, liver cancer or another such disease. It is also known that, particularly in young persons infected with HBV whose acute hepatitis symptoms are mild or difficult to discern at all, there is a greater risk of continuous infection over time as the virus remains in the body. HBV can be transmitted to newborns if the mother is positive for HBsAg (the hepatitis B surface antigen, also known as the Australia antigen), and it can also be transmitted through contact with the blood of someone infected with the hepatitis virus, through sexual contact with someone infected with the hepatitis virus, and in other such ways.

b. Vaccination Method

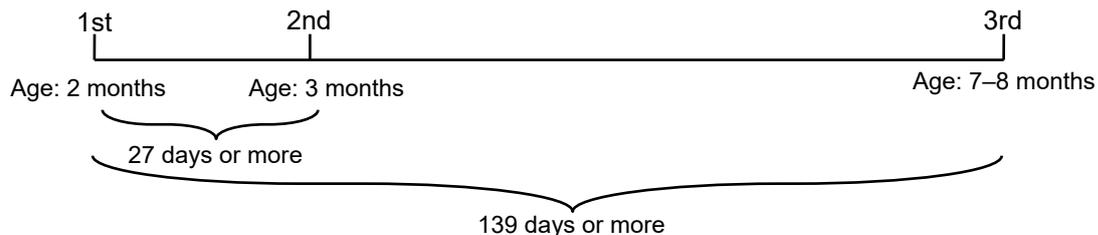
Hepatitis vaccine inoculations are carried out 3 times in total: 2 times with an interval of at least 27 days in between (the standard age for these are 2 to 3 months after birth), **followed by 1 additional inoculation*** at least 139 days after the initial inoculation (standard age for this is 7 to 8 months after birth).

* Children born from an HBsAg-positive mother who are receiving hepatitis B vaccinations as an infection prevention measure (to prevent infection from mother to child) are not eligible to receive this vaccine as part of routine vaccinations. Such persons should continue receiving vaccinations using health insurance.

Standard vaccination schedule

1st and 2nd inoculations: the 2nd inoculation is administered at least 27 days after the initial inoculation.

3rd inoculation: the 3rd inoculation* is administered at least 139 days after the initial (1st) inoculation. (Standard ages for inoculations are 2 months, 3 months and 7–8 months.)



* Regarding the interval of 139 days or more: the 3rd inoculation may be administered on the same day of the 20 weeks after the 1st inoculation.

Please note that about half a year is required from the initial inoculation to finish all three inoculations. Confirm the vaccination schedule carefully before proceeding.

* Two types of hepatitis B vaccines are available. It is preferable that the recipient receive all three inoculations using the same vaccine type; however, even if the vaccine type is changed partway through, it is still treated as a routine vaccination.

The usefulness of changing the vaccine as it pertains to efficacy and safety is has been confirmed based on results of research performed by the Ministry of Health, Labour and Welfare.

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

Vaccination Type	Recommended Age Ranges for Vaccination (Standard vaccination age ranges; circled numbers indicate dosage number)																			Ages of Eligibility for Free Vaccination (Eligible ages according to law)						
	After birth:																									
Age	2 mo.	3 mo.	5 mo.	6 mo.	8 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.	19 yr.	20 yr.
Hepatitis B	①②																									

Note: About half a year is required from the first inoculation to finish all three inoculations.

c. Vaccine Side Effects

Side effects include redness, induration (hardening and stiffening), swelling and pain at the injection site, as well as fever, fatigue, headache, etc. In extremely rare cases, more severe side effects such as anaphylactic reaction and acute disseminated encephalomyelitis (ADEM) may occur.

Rotavirus gastroenteritis

a. Explanation of Disease

The rotavirus enters the mouth and infects the intestinal tract. It is highly infectious, and even with proper handwashing and disinfection, it is difficult to prevent. Most children will catch it as infants.

Diarrhea and vomiting will stop after around one week, but if they become heavy, symptoms of dehydration may appear. It is the most common infection when an infant is hospitalized for acute gastroenteritis.

This virus can be caught numerous times throughout one's life, but symptoms are more likely to be serious when infected the first time. Caution is required because in rare cases it can affect the brain or kidneys.

Infection is also possible immediately after birth. It is recommended to finish the inoculation early.

b. Vaccination Method

There are two types of rotavirus vaccinations, both of which are administered the first time **between 2 months after birth and 14 weeks and 6 days after birth**. (Getting the first inoculation 15 weeks and 0 days after birth or later is not recommended.)

The second and final Rotarix [RV1] inoculation is administered at least 27 days after the first (**by 24 weeks and 0 days after birth**). The subsequent Rotatec [RV5] inoculations are each administered in intervals of at least 27 days following the first inoculation (**by 32 weeks and 0 days after birth**).

If the infant has difficulty swallowing the vaccine or throws it up, as long as you can confirm that some has been swallowed, there should not be any issues with its effectiveness, and re-inoculation is not required.

There is no difference in effectiveness or safety between the two vaccines. However, the number of inoculations is different. Talk to your doctor and consider the scheduling of other inoculations when choosing the vaccine.

Generally speaking, it is not possible to change the type of vaccine during the vaccination process. Once the initial inoculation has been administered, use the same vaccine for subsequent inoculations.

This vaccine decreases the occurrence of rotavirus gastroenteritis by 70% to 80% and almost entirely prevents severe cases that require hospitalization. However, it does not prevent gastroenteritis by causes other than rotavirus.

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

①	Ages recommended for inoculation (Indicates the standard age for inoculation. The red circled numbers indicate the number of the inoculation.)	□	Ages eligible for free inoculations (Ages stipulated by law to receive free inoculations)
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Vaccination Type	Age	After birth														
		6 week	2 mo.	14 weeks and 6 days	24 weeks and 0 day	32 weeks and 0 day	1 yr	2yr	3yr	4yr	5yr	6yr	7yr			
Rotavirus	Rotarix [RV1]		①	②												
	Rotatec [RV5]		①	②	③											
		<p>Both of which are administered the first time between 2 months after birth and 14 weeks and 6 days after birth.</p> <p>The second is administered at least 27 days after the first.</p>														

* Understanding "xx weeks and days after birth"

The count starts from the day after birth. This day is "0 weeks and 1 day" after birth.

Also, statements such as "6 weeks 0 days after birth" and "by 14 weeks and 6 days after birth" include the days on "6 weeks and 0 days after birth" and "by 14 weeks and 6 days after birth", respectively.

c. Precautions Prior to Vaccination

Babies may have difficulty swallowing the vaccine if their stomachs are full. It is recommended to avoid breast feeding 30 minutes before inoculation.

Follow the instructions of a doctor or nurse to ensure the vaccine can be swallowed without problems.

d. Precautions Following Vaccination

Careful monitoring is required on the day of the inoculation as anaphylactic reactions (hives, difficulty breathing, etc., resulting from an allergy to the vaccine) may occur as a serious but rare side effect.

Research reports have suggested a higher than normal risk of intussusception 1 to 2 weeks after the inoculation.

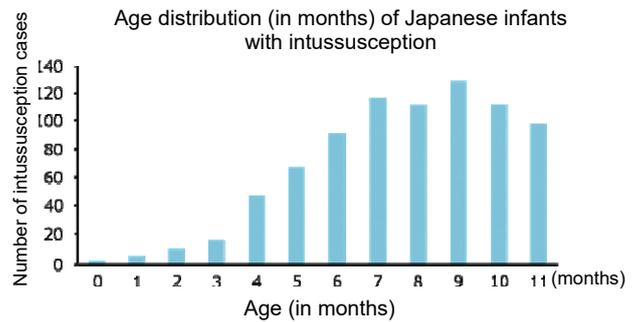
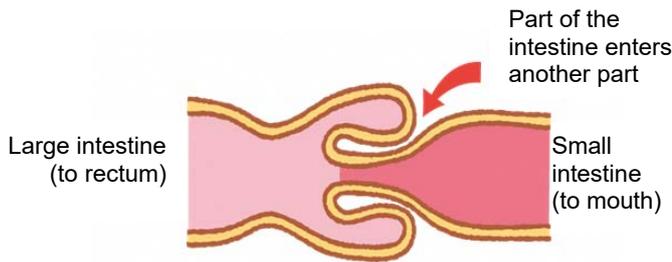
Symptoms of intussusception include: sudden and excessive crying, repeated mood shifts, vomiting, blood in the stool, and exhaustion with a pale face. If one of these symptoms is observed or the baby's condition is considered to be out of the ordinary, have the baby examined immediately by a medical institution. If the baby is examined at a medical institution other than the one that administered the inoculation, tell the doctor about the inoculation.

The stool of the baby may include the virus of the vaccine for up to 2 weeks after inoculation. Take proper care in washing your hands after changing diapers, etc.

e. About Intussusception

At age 0, this is a disease that can occur even without the rotavirus vaccine. The risk increases as time passes from the age of 3 to 4 months (refer to the following graph).

It is recommended to get the inoculation early and as many times as prescribed.



Intussusception sometimes requires surgery, but it can be treated without surgery in most cases if the treatment is performed soon after onset.

Tuberculosis (BCG)

a. Explanation of Disease

Japan has around 18,000 tuberculosis patients each year, and infection from adults to children is not uncommon. Resistance (immunity) cannot be passed down from the mother, meaning that newborns are at risk of contracting tuberculosis, and such infection may result in tuberculous meningitis and other problems that have the potential to bring about severe aftereffects. All parents/guardians are encouraged to immunize children who have reached the age of 5 months with the BCG vaccine. If you think that your child may be at risk for infection from a tuberculosis patient(s) who is part of their life, please consult with your local ward office's Health Promotion Section (refer to p. 25) prior to vaccination.

b. Vaccination Method

One inoculation is performed during the standard inoculation period of 5 to 8 months after birth. If this period is passed, inoculations are administered up until age 1.

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

Vaccination Type	Age	After birth:																						
		3 mo.	6 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.	19 yr.	
BCG			①																					

c. Vaccine Side Effects

- Red spots will appear about 10 days after inoculation, and some of these may contain small amounts of pus. This reaction intensifies to the greatest degree about 4 weeks after injection, after which scabs will form and heal within 3 months' time, leaving only needle marks at the injection sites. These do not represent any abnormal reaction; they are evidence that resistance (immunity) has been established. Healing will proceed naturally, so avoid wrapping the area with bandages or applying adhesive bandages and keep it clean. If the injection sites are damp or substance is oozing out after 3 months' time, visit a doctor.
- Lymph nodes in the armpit on the same arm as the injection sites may swell up. If this occurs, keep an eye on their condition until they return to normal. Visit a doctor if the area near the injection sites becomes inflamed, swells excessively, or accumulates and releases pus (after natural breakage).
- In rare cases, serious side effects include shock, anaphylaxis, disseminated BCG infection, osteitis, osteomyelitis, periostitis, and nodular skin lesions.

- Symptoms to look out for

If a child who has already been infected by the tubercle bacillus receives the BCG vaccine, localized reddening, swelling and formation of pus will occur around the injection sites within 10 days, and resolution (receding of inflammation) and scarring will occur 2-4 weeks after injection as part of the healing process. This reaction is known as Koch's phenomenon. If you observe a reaction in your child that resembles this phenomenon, contact the medical institution that administered the vaccine or your local ward office's Health Promotion Section (refer to p. 25).

Diphtheria, Pertussis, Tetanus and Polio (DPT-IPV)

a. Explanation of Diseases

(a) Diphtheria

Diphtheria is spread through droplet infection.

Domestic cases have not been reported recently thanks to vaccination. However, only about 10% of those infected with diphtheria show symptoms. The remaining asymptomatic carriers can still infect others.

Infection occurs in the throat in most cases, although it sometimes occurs in the nose. Symptoms include high fever, throat pain, a barking cough (coughing similar to a dog's bark sound) and vomiting. A false membrane can form, which poses the risk of death by suffocation. Because myocardial damage, neuroparalysis and other complications can occur as a result of the toxins released by bacteria 2–3 weeks after contraction of diphtheria, caution must be taken.

Diphtheria spread in Russia during the first half of the 1990s due to a decline in vaccination rates.

(b) Pertussis

Pertussis (whooping cough) is spread through droplet infection.

Infection with pertussis has continued to decrease since the introduction of the pertussis vaccine, but infection among a group at a Japanese university was reported in 2007. In recent times, pertussis characterized by a persistent cough has been observed in persons going through puberty and adults. Sufficient caution should be taken, as this may be the source of infection among infants, which can result in severe illness in some cases.

Pertussis begins with symptoms similar to the common cold. Coughing will continually grow worse and the sufferer's face will become red as s/he coughs violently. After coughing, the sufferer will inhale sharply, creating a flute-like whooping sound. Fever does not usually occur. Infants may be unable to breathe due to coughing, resulting in their lips turning blue or purple (cyanosis), seizure, etc. Among infants, pertussis may result in pneumonia, encephalopathy and other serious complications, and in some cases death.

(c) Tetanus

Clostridium tetani (tetanus bacilli) do not spread through direct infection from person to person, but instead infect the body from dirt on the ground by entering through cuts. If the bacteria are allowed to multiply in the body, the toxin they release can cause the jaw to stop opening properly, trigger seizures and even cause death. A majority of tetanus patients are infected by minor cuts that neither they nor the people around them notice. Because bacteria are present in dirt on the ground, numerous opportunities for infection exist.

(d) Polio

Outbreaks of polio (poliomyelitis), a disease originally known as infantile paralysis, occurred repeatedly in Japan until the early 1960s, but today no natural infections are being reported thanks to successful vaccination efforts.

However, polio caused by wild polioviruses is still seen today in Pakistan, Afghanistan and certain other countries, meaning that Japanese people visiting these places may become infected and bring the disease back into Japan.

The poliovirus spreads from person to person. The virus is expelled in the infected persons' feces, enters through the mouth, multiplies in the throat and intestines, and several weeks later is expelled again in the feces.

Although a large proportion of infected persons do not show symptoms, about 5% experience throat pain, fever and other cold-like symptoms. Aseptic meningitis occurs in 1%–2% of those infected, but recovery occurs in 2–10 days.

About 1 in 1,000–2,000 patients suffer from paralysis and movement disorder as an aftereffect. In some cases, respiratory arrest results in death.

b. Vaccination Method

Vaccination is performed using the DPT-IPV (diphtheria, pertussis, tetanus and polio) vaccine or DT (diphtheria and tetanus) vaccine as follows. Numerous doses are required, so take care to avoid forgetting any doses along the way.

(a) Stage I Initial Inoculations and Booster *

Stage I DPT-IPV vaccination includes 3 initial inoculations (at 20–56 day intervals) when the child is 3–89 weeks of age following birth as well as 1 additional inoculation (12–18 months after completion of the first 3 doses) for a total of 4 doses. (In certain situations, the additional inoculation may be administered earlier than usual, with at least a 6-month interval following completion of the first 3 doses.)

Although it is important to follow the predetermined inoculation schedule in order to reliably ensure that immunity is established, you should complete the proper number of inoculations rather than starting over if a decline in health results in a longer interval between doses than was originally planned. Please consult with your family doctor for further details.

* Children who have already started DPT vaccinations, except in certain cases (★), receive DPT-IPV vaccinations for their remaining inoculations.

(★) Regarding the inactivated polio vaccine (IPV), those who have completed DPT vaccination but have not completed polio vaccination will receive this DPT-IPV vaccine.

(b) Stage II Inoculation

One stage II DT inoculation is administered for children who have reached age 11 but have not yet reached age 13.

◆ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

① Recommended Age Ranges for Vaccination (Standard vaccination age ranges; circled numbers indicate dosage number) Ages of Eligibility for Free Vaccination (Eligible ages according to law)

Vaccination Type	After birth:																
	3 mo.	6 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.
DPT-IPV (DPT) (Polio)																	
Stage I (Initial)	①②③																
Stage I (Booster)				④													
DT																	
Stage II														①			

c. Vaccine Side Effects

The main side effects of DPT-IPV are redness, swelling, and induration (hardness and swelling) at the injection site as well as fever, mood swings, nasal discharge, coughing, hives, loss of appetite, reddening of the throat, and vomiting. Serious side effects include shock, anaphylaxis, thrombocytopenic purpura, encephalitis, and seizure.

◆ Droplet transmission ◆

The virus or bacteria is carried in saliva droplets or respiratory secretions ejected into the air through coughing and sneezing and can infect others within a range of 1 m.

◆ Airborne transmission ◆

Infection occurs through viruses or bacteria carried in the air. Measles, chickenpox, and tuberculosis are transmitted by air.

◆ Contact transmission ◆

Infection occurs when pathogens attach to the skin through direct skin contact or indirect contact through the surface of objects such as handrails.

◆ Incubation period ◆

This refers to the period of time after the virus, bacteria, or other pathogen infects the body before symptoms

Measles and Rubella

a. Explanation of Disease

(a) Measles

The measles virus is transmitted through the air, droplets, and physical contact. The incubation period following infection is 10–12 days, during which time symptoms do not appear. Following this, symptoms begin to show, such as fever, coughing, nasal discharge, eye discharge, and red rashes. A fever of around 38°C (100.4°F) as well as coughing and nasal and eye discharge will continue for 3–4 following the onset of symptoms, after which the fever will go down temporarily and then shoot up to 39°C–40°C (102.2°F–104.0°F), followed by the development of red rashes on the neck, face and elsewhere that spread gradually across the entire body. The high fever will go down after 3–4 days and the rashes will gradually disappear, but skin pigmentation will remain for a while.

The main complications are bronchitis, pneumonia, otitis media (inflammation of the inner ear), encephalitis and certain others. Among a group of 100 people who contract measles, approximately 7–9 will suffer from otitis media and approximately 6 will suffer from pneumonia. Encephalitis is seen in approximately 1–2 of every 1,000 cases.

Several years to a decade after contracting measles, some people will suffer from subacute sclerosing panencephalitis (SSPE), which is a severe type of encephalitis. This has been observed in approximately 1–2 of every 100,000 measles patients. Measles is fatal in approximately 1 of every several thousand cases.

(b) Rubella

Rubella occurs following droplet infection with the rubella virus. After infection, there is a 2–3 weeks period (incubation period) where no symptoms appear.

After this period, primary symptoms include red rashes, fever and swelling of the lymph nodes on the back of the neck. Coughing, nasal discharge, red eyes (bulbar conjunctival hyperemia) and other such symptoms may also appear. Reported complications caused by rubella include joint pain, thrombocytopenic purpura, encephalitis and others. Thrombocytopenic purpura occurs in approximately 1 out of every 3,000 rubella cases and encephalitis in approximately 1 out of every 6,000 cases. Rubella tends to have more severe effects when contracted by adults than when contracted by children.

If a pregnant woman contracts rubella during the early stages of her pregnancy, it may infect her baby with a disease known as congenital rubella syndrome (CRS). This can cause hearing impairment, visual impairment, problems with the baby's heart and other complications/impairments.

◆ Airborne Infection ◆

Airborne infection is when a virus or bacteria travels through the air and infects a person via that medium. Measles, chickenpox and tuberculosis spread in this way.

◆ Contact Infection ◆

Pathogens can attach to the skin directly when skin surfaces come into contact, or indirectly when a person's skin comes in contact with handrails, stethoscopes or other such objects, resulting in infection.

◆ Incubation Period ◆

This refers to the period following infection by a pathogen during which time symptoms have not yet appeared.

b. Vaccination Method

The Preventive Vaccination Law regulations were amended in 2006, enabling two-dose vaccination using the measles-rubella (MR) vaccine.

(a) Stage I Vaccination

One inoculation with the MR vaccine is administered 12–23 months after birth. If you wish to have your child receive separate measles and rubella vaccines, each vaccine will be administered 1 time with an interval of 27 days or more in between inoculations.

(b) Stage II Vaccination

One inoculation with the MR vaccine is administered from age 5 up until (but not including) age 7, **between April 1 a year before the child enters elementary school and March 31 of the year the child enters elementary school (when the child is in the final year of kindergarten).** If you wish to have your child receive separate measles and rubella vaccines, each vaccine will be administered 1 time with an interval of 27 days or more in between inoculations.

◆ Recommended Vaccination Ages

① Recommended Age Ranges for Vaccination * Same as Ages of Eligibility for Free Vaccination
(Standard vaccination age ranges; circled numbers indicate dosage number)

Vaccination Type	Age																					
	After birth:																					
	3 mo.	6 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.	19 yr.
Measles-rubella (MR)																						
Stage I				①																		
Stage II								★①														

★ Please complete vaccination after the child has reached age 5 but before/he has reached 7, between Apr. 1 a year before s/he enters elementary school and Mar. 31 of the year s/he enters elementary school

c. Vaccine Side Effects

(a) Measles-Rubella (MR) Vaccine

The most common side effects of the MR vaccine are fever and rash. Such symptoms usually appear within 5–14 days of inoculation. Fever, rash, itchiness and other such systems may appear the day of or day following inoculation due an apparent hypersensitive reaction, but these will subside within 1–3 days. Redness, swelling, induration (hardening and stiffening), lymph node swelling and other such symptoms appear near the injection site on occasion, but these are only temporary and usually clear up within several days.

On rare occasions, severe side effects have been reported including shock, anaphylactic reaction (angioedema, hives, breathing difficulty, etc.), acute thrombocytopenic purpura (purpura (purple patches), nosebleed, bleeding from the mucus membranes of mouth, etc.), encephalitis, seizure and others.

(b) Independent Measles Vaccine

The most common side effects of the measles-only vaccine, which usually occur within 5–14 days of inoculation, include fever of at least 37.5°C/99.5°F but below 38.5°C/101.3°F (occurs in approximately 5% of persons inoculated), fever of 38.5°C/101.3°F or higher (approximately 8% of persons inoculated) and the development of rashes similar in appearance to those caused by measles (approximately 6% of persons inoculated). However, fever symptoms usually clear up within 1–2 days, and rash appearance ranges from a small number of red spots (erythema) and papules to symptoms similar to those of natural measles. Redness, swelling and hives near the injection site as well as febrile seizures (approximately 1 in 300 persons) and other symptoms have also been observed, but these are temporary in nearly all cases.

Severe side effects occur on rare occasions, including shock, anaphylactic reaction, encephalitis/encephalopathy (occurs in 1 or less cases out of 1–1.5 million) and acute thrombocytopenic purpura (occur in approximately 1 out of 1 million cases).

(c) Independent Mumps Vaccine

The most common side effects that have been confirmed include rash, hives, erythema (redness of the skin), itchiness, fever, lymph node swelling and joint pain.

On rare occasions, severe side effects have been reported including shock, anaphylactic reaction, and acute thrombocytopenic purpura (occur in approximately 1 out of 1 million cases).

Chickenpox (varicella)

a. Explanation of Disease

Chickenpox (varicella) is spread through direct contact with or airborne infection from another person with chickenpox or shingles. The incubation period following infection is 10 to 20 days, although 13 to 17 days is most common. In most cases today, skin rashes tend to transition into papules, blisters, pustules and then scabs. Rashes tend to appear frequently on the torso, but they are also seen on the scalp. Occasionally, slight fever may occur. Symptoms tend to be mild for most people, but patients with leukemia or otherwise immunocompromised states may suffer severe symptoms.

b. Vaccination Method

One initial immunization with the chickenpox (varicella) vaccine is carried out 12–35 months after birth and 1 booster administered at least 3 months after (usually 6–12 months after) the first inoculation for a total of 2 inoculations.

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

Vaccination Type	Recommended Age Ranges for Vaccination (Standard vaccination age ranges; circled numbers indicate dosage number)																Ages of Eligibility for Free Vaccination (Eligible ages according to law)		
	After birth:																		
Age	3 mo.	6 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.		
Chickenpox Initial				①															
Booster					②														

c. Vaccine Side Effects

Although it is rare to see side effects with these vaccines, fever and rash sometimes occur, and on rare occasions reddening, swelling, induration (hardening and stiffening) have been observed.

On rare occasions, severe side effects have been reported including shock, anaphylactic reaction, and acute thrombocytopenic purpura (occur in approximately 1 out of 1 million cases).

Japanese Encephalitis

a. Explanation of Disease

Japanese encephalitis is caused by the Japanese encephalitis virus. It is not transmitted from person to person directly; rather, the virus multiplies in the bodies of pigs and other animals and is then transmitted via mosquitoes. Following a 7–10 day inoculation period, acute encephalitis occurs with symptoms including high fever, headache, vomiting, confusion, seizure and others.

Although the virus is most prominent in western Japan, it is distributed throughout the entire country. Japanese encephalitis occurs in pigs from June to October every year, and in some regions 80% or more of the swine are infected. Previous occurrence in infants and young schoolchildren has declined due to the spread of vaccinations, and in recent times the disease has appeared primarily among elderly persons who have not been immunized. Overseas, outbreaks are currently observed in South Asia (India, etc.) and Southeast Asia.

Encephalitis occurs in 1 out of every 100–1,000 infected persons, and most exhibit no symptoms.

The mortality rate for persons who contract encephalitis is approximately 20%–40%, and nerve-related aftereffects such as paralysis occur in 45%–70% of surviving patients.

b. Vaccination Method

Immunizations are carried out as follows using the freeze-dried, cell culture–derived Japanese encephalitis vaccine.

The usual inoculation method is as outlined in the charts on pp. 2–3 as well as the chart on the following page. For those who did not receive vaccines due to the cessation of active encouragement of vaccination in 2005, eligibility for utilization of remedial measures has been modified as of October 1, 2016 to include **persons up to (but not including) age 20** who were born between April 2, 2000 and April 1, 2007.

Please note that person born between April 2, 2007 and October 1, 2009 who are currently receiving stage II inoculations are eligible to receive stage I inoculations they may have missed.

Additionally, as of October 1, 2016, persons born on or before April 1, 2000 or after October 2, 2009 are ineligible for remedial measures.

Because subsequent inoculation methods may differ from standard methods for persons eligible for remedial measures depending on individual vaccination history, please prepare your Maternal and Child Health Handbook (Boshi Kenko Techo) or other documentation containing vaccination records and contact the Yokohama City Vaccination Call Center prior to vaccination. (refer to p. 26)

[Standard inoculation method] (stage I: 6 to 89 months after birth / stage II: from age 9 up until (but not including) age 13)

- (1) The 2nd stage I initial inoculation is administered 6–28 days after completion of the 1st stage I initial inoculation.
- (2) The stage I booster is administered approximately 1 year after completion of the 2nd stage I initial inoculation.
- (3) The stage II inoculation is administered approximately 5 years after completion of the stage I booster.

◇ Recommended Vaccination Ages and Ages of Eligibility for Free Vaccination

Vaccination Type	Age																						
	After birth																						
	3 mo.	6 mo.	9 mo.	1 yr.	2 yr.	3 yr.	4 yr.	5 yr.	6 yr.	7 yr.	8 yr.	9 yr.	10 yr.	11 yr.	12 yr.	13 yr.	14 yr.	15 yr.	16 yr.	17 yr.	18 yr.	19 yr.	20 yr.
Japanese encephalitis																							
Stage I initial						①②																	
Stage I booster							③																
Stage II													①										
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Remedial measures (starting May 20, 2011) Apply only to persons born between April 2, 2000 and April 1, 2007 </div>																							
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> Persons born between April 2, 2007 and October 1, 2009 who are currently receiving stage II inoculations are eligible to receive stage I inoculations they may have missed. </div>																							

c. Vaccine Side Effects

Standard side effects, including fever as well as swelling and pain around the injection site, have been reported.

In extremely rare cases, severe side effects have been reported, including shock, anaphylaxis, acute disseminated encephalomyelitis (ADEM), encephalitis/encephalopathy, seizure, and acute thrombocytopenic purpura.

* Reactions such as ADEM and encephalitis/encephalopathy are not unique to the Japanese encephalitis vaccine. They can occur following the onset of infectious disease, following inoculation with other vaccines and in other such cases.)

(Current national-level measures pertaining to the cessation of active encouragement of Japanese encephalitis vaccination)

- May 2005: Active encouragement of vaccination ceased following a recommendation from the Ministry of Health, Labour and Welfare (MHLW).
- Apr. 2010: Active encouragement of vaccination resumed for 3-year-old children only following notification from the MHLW.
- Aug. 2010: In accordance with an ordinance of the MHLW, stage II inoculation using the freeze-dried, cell culture–derived Japanese encephalitis vaccine (★) was approved for use in routine vaccinations, making routine stage II vaccinations possible. In addition, remedial measures (in the form of inoculation opportunities) were also initiated for persons who were eligible to receive stage II vaccinations but had not yet completed all stage I inoculations.
- Apr. 2011: Following notification from the MHLW, active encouragement of vaccination was initiated for 4-, 9- and 10-year-old children (in addition to 3-year-old children) who had not completed stage I vaccination.
- May 2011: In accordance with an ordinance of the MHLW, a new remedial measure was established to expand eligibility up to (but not including) age 20 for persons who had not completed vaccination and were born between June 1, 1995 and April 1, 2007. •
- April 2012: In addition to active encouragement of vaccination for 3- and 4-year-old children as well as 9- and 10-year-old children who have not completed stage I inoculations, active encouragement of vaccination for 8-year-old children who have not completed stage I inoculations was resumed following notification from the MHLW. Person born between April 2, 2007 and October 1, 2009 who are currently receiving stage II inoculations are eligible to receive stage I inoculations they may have missed.
- April 2013: In addition to active encouragement of vaccination for 3- and 4-year-old children as well as 8-, 9- and 10-year-old children who have not completed stage I inoculations, active encouragement of vaccination for 7-year-old children and who have not completed stage I inoculations and 18-year-olds who have not completed stage II inoculations was resumed following notification from the MHLW. In accordance with an ordinance of the MHLW, eligibility for utilization of remedial measures was modified so that persons up to (but not including) age 20 who have not completed vaccination and were born between April 2, 1995 and April 1, 2007 can receive vaccinations.
- April 2014: In addition to active encouragement of vaccination for 3- and 4-year-old children as well as 7-, 8-, 9- and 10-year-old children who have not completed stage I inoculations, active encouragement of vaccination for 8-year-old children (born in 2006) and 9-year-old children (born in 2005) who have not completed stage I additional (booster) inoculations as well as 18-year-olds (born in 1996) who have not completed stage II inoculations was resumed following notification from the MHLW.
- April 2015: Active encouragement of vaccination for 18-year-olds (born in 1997) who have not completed stage II inoculations was resumed following notification from the MHLW.

(★) Freeze-dried, cell culture–derived Japanese encephalitis vaccine:

Although Japanese encephalitis vaccines were formerly derived from mouse brains, the freeze-dried, cell culture–derived vaccine was approved in February 2009 under the Pharmaceutical Affairs Law, and amendment via MHLW ordinance was implemented in June of the same year to enable use of the new freeze-dried vaccine in routine stage I inoculations. In August 2010, amendment via MHLW ordinance was implemented to enable use of the vaccine for routine stage II inoculations.

9 Relief System for Persons Adversely Affected by Vaccines

Persons who require treatment at a medical institution, whose daily lives are affected by impediment or disability, or whose health is otherwise adversely affected by the side effects of a vaccine are eligible to receive compensation based on the Preventive Vaccination Law. If your health is affected adversely by a vaccination, contact your local ward office's Health Promotion Section or the Health and Social Welfare Bureau Health Safety Division.

◆ Side Effects

Fever, redness and swelling at the inoculation point, and other relatively common, mild side effects may occur following vaccination. In extremely rare cases, encephalitis, neurological disorders and other severe side effects may occur.

However, such severe side effects are not necessarily caused by the vaccine itself; rather, they may be caused by an infection that happens to take place at the same time vaccination is administered.

Therefore, if the health of a person worsens following vaccination, that person is only eligible to receive compensation under this relief system if an individualized investigation into the matter demonstrates that the adverse effects on their health were brought about by a vaccination.

◆ Decisions Regarding Compensation Eligibility

Based on the application form, medical records and other paperwork submitted by the applicant, Yokohama City and the Ministry of Health, Labour and Welfare (MHLW) will inspect required paperwork, symptoms and so forth, and an MHLW-established sickness and disability verification committee comprising outside experts will make the final decision.

Based on this decision, Yokohama City will inform the applicant whether or not they are eligible to receive compensation.

◆ Types of Compensation

(a) If the applicant has received medical treatment at a medical institution

Compensation will be supplied to cover medical treatment costs (patient copayments) as well as the various medical fees and costs required for treatment.

(b) If the vaccination has caused a disability

Child Disability Insurance payments (Disability Insurance payments if the person in question is 18 years of age or older) will be paid four times annually to support the upbringing of the person with the disability.

(c) If the vaccination has caused death

Funeral costs will be covered and an additional one-time payment made.

◆ Health Checkups for Young Children at Medical Institutions (Free Child-related Consultations)

Your child can receive health examinations three times free of charge using the medical consultation forms (*jushin-hyo*) attached to your Maternal and Child Health Handbook (*Boshi Kenko Techo*) / medical examination ticket book.

① Description

The costs of these health checkups and child-rearing consultations are covered by public funds. However, public funds do not cover medical treatment, etc.

② Consultations and Eligible Periods

Consultation	Standard Age for Checkup	Medical Consultation Form Validity Period (Eligible Age Range for Free Checkup)
1st	1 month after birth	0–3 months after birth (under 4 months of age)
2nd	7 months after birth	5–8 months after birth (under 9 months of age)
3rd	12 months after birth	9–12 months after birth (under 13 months of age)

③ Participating Medical Institutions

Examination is only possible at medical institutions participating in health checkups for young children (free child-related consultations) within Yokohama City.

Available examination dates are different at each medical institution, so please confirm availability in advance.

*** Please note that medical institutions outside of Yokohama City are not eligible.**

*** Medical examination notifications are not sent out by individual medical institutions. Please come in for an examination during the period of validity shown on your medical consultation form.**

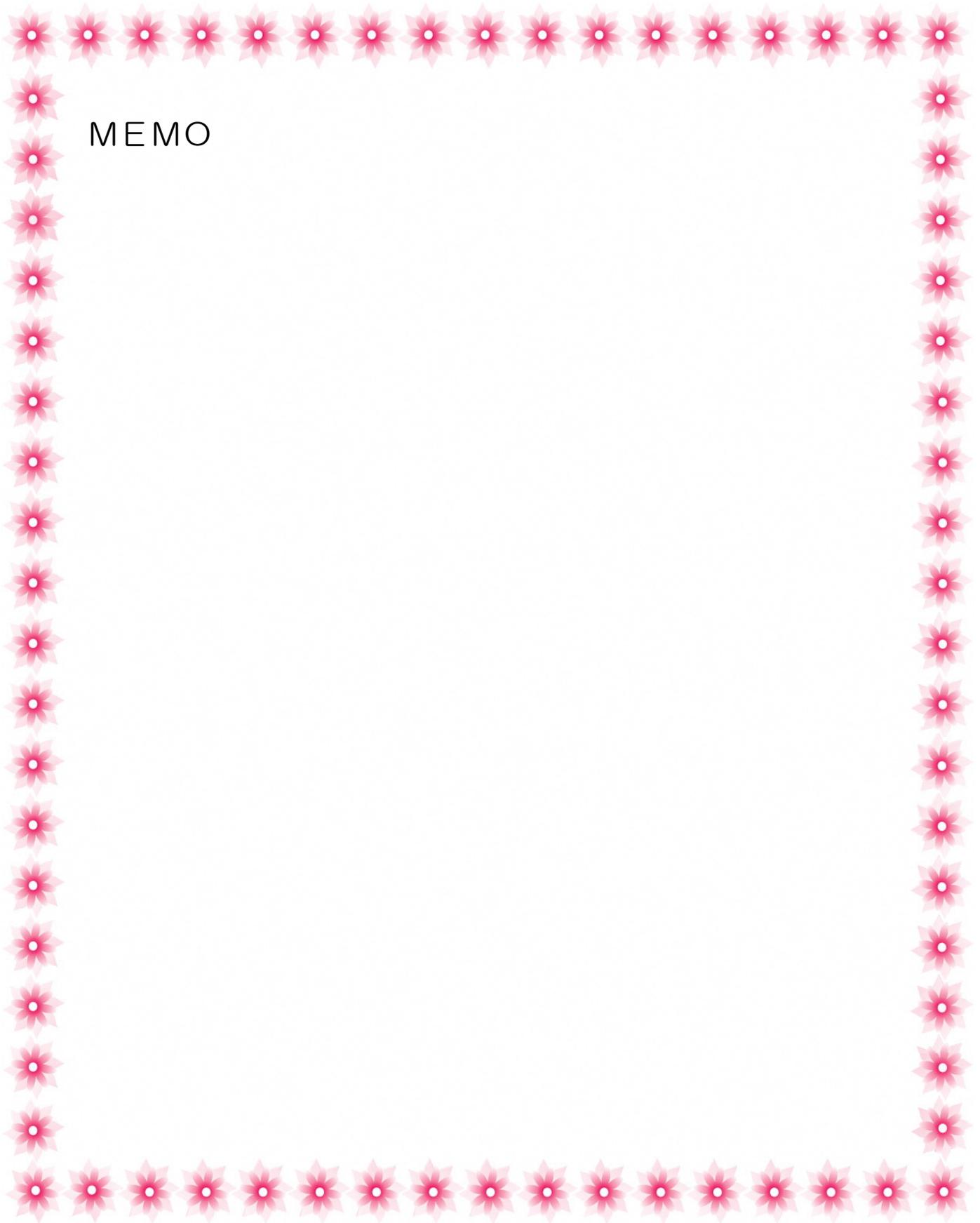
④ Contact

Your local ward office's Health and Welfare Center Children and Families Support Division

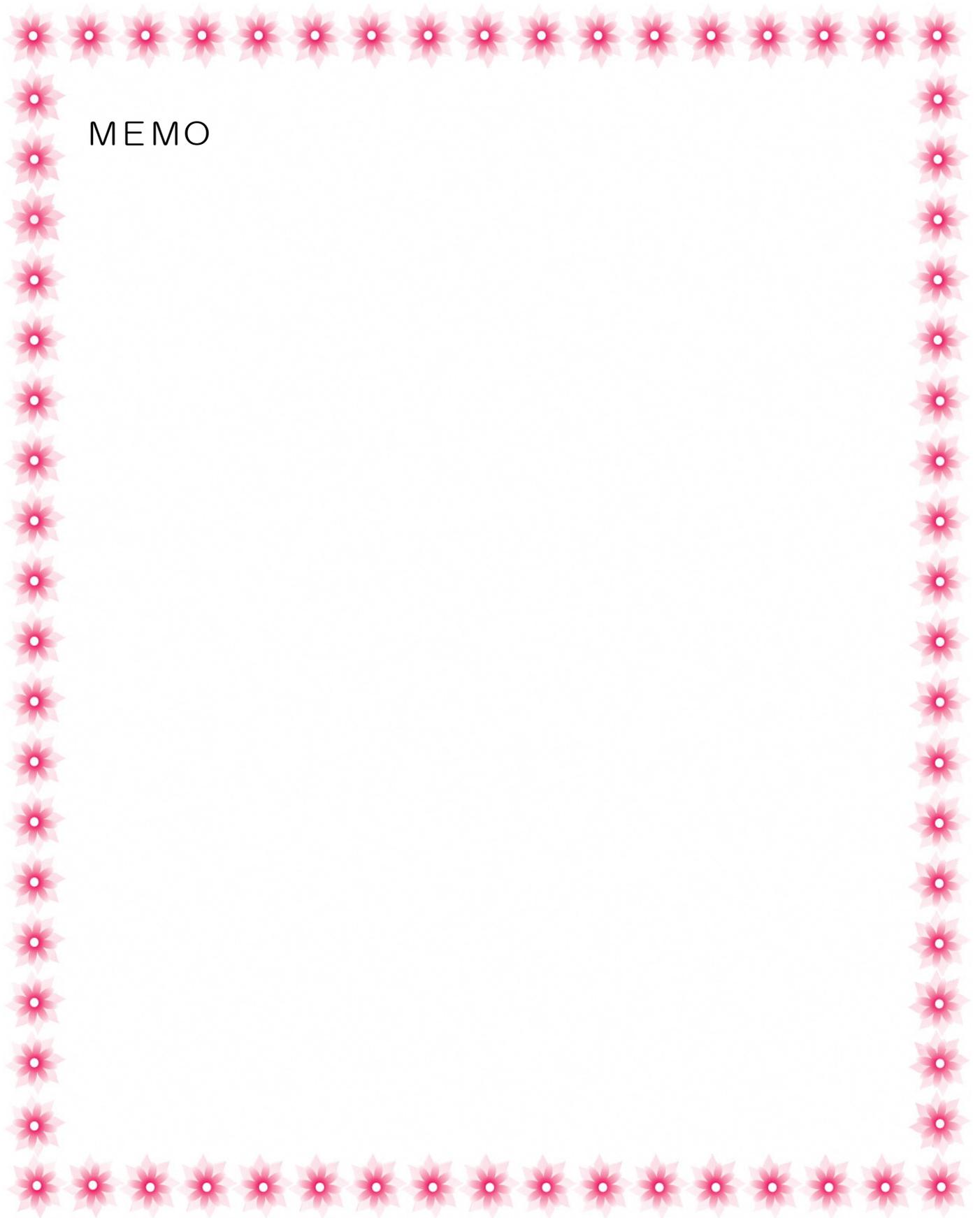
◆ Health Checkups for 4-month-old, 18-month-old and 3-year-old Children

Health checkups are carried out at each ward's Health and Welfare Center at important milestones in each child's growth and development in order to promote unhindered, smooth physical and mental development, and also to discover possible sicknesses or irregularities so that, if necessary, the child can be sent to a medical specialist as soon as possible. Furthermore, public health nurses, dieticians, dental hygienists and other such experts support child-rearing efforts through the provision of necessary information, consultations for parents who have questions about child-rearing, and other such services.

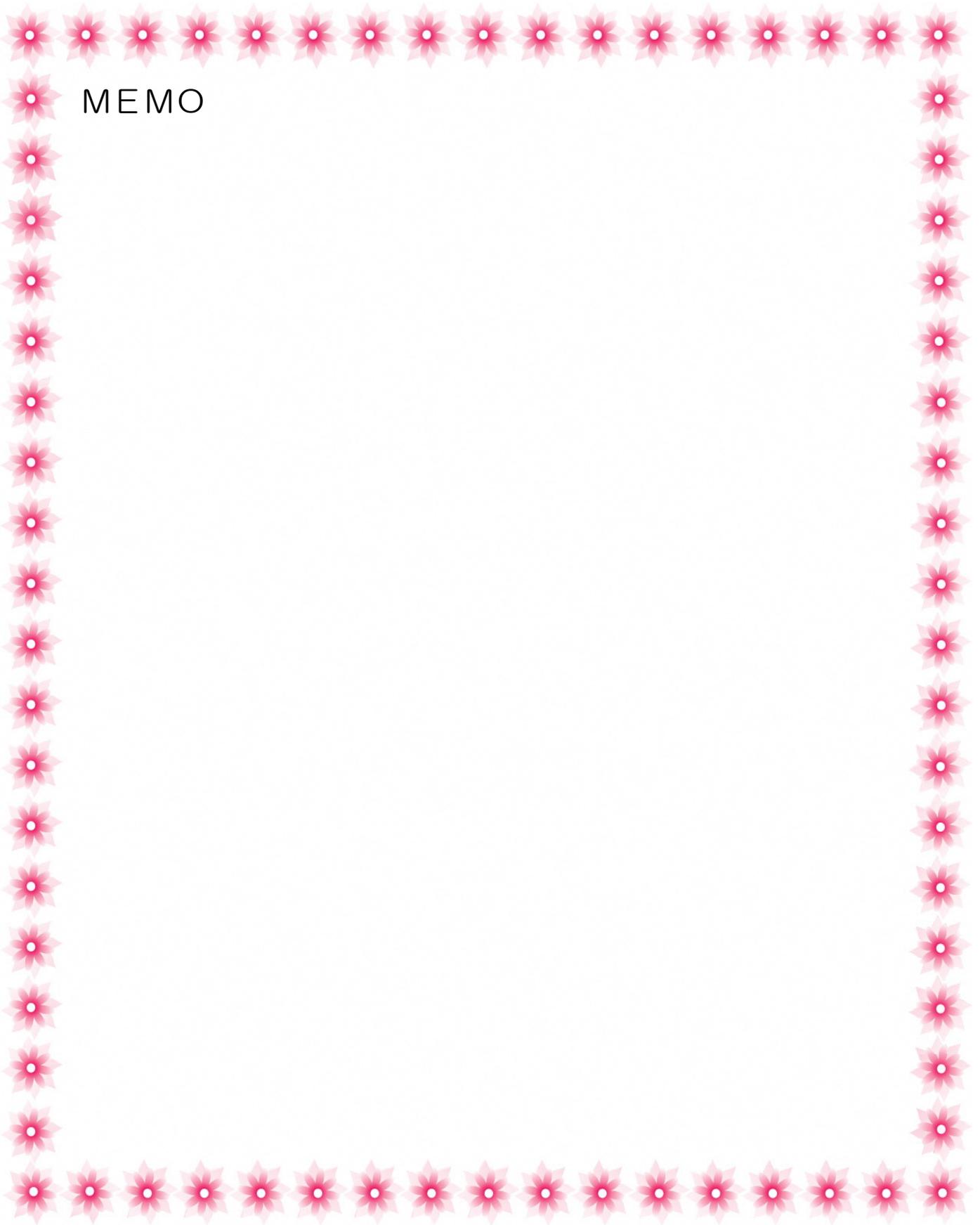
Citizens will be notified of examination dates and times through individual health checkup notifications (*kenshin no oshirase*) sent via postal mail by your local ward's Health and Welfare Center. Please confirm your examination date and time as listed on this notification.



MEMO



MEMO



MEMO

Health and Welfare Centers in Yokohama City's 18 Ward Offices

Health Promotion Section, Health and Welfare Division (Telephone consultations: 8:45 a.m.–5:15 p.m. on weekdays; in-facility consultations: 8:45 a.m.–5:00 p.m. on weekdays; not available on weekends and national holidays or during the New Year holiday period)

(Before contacting us, please prepare your Maternal and Child Health Handbook (*Boshi Kenko Techo*) or other documentation containing vaccination records.)

* For information on medical institutions participating in health checkups for young children (free child-related consultations), contact the Children and Families Support Division.

Aoba Ward Health and Welfare Center	☎ 978-2438	FAX 978-2419	8 min. on foot from Ichigao Stn. (Tokyu)
Asahi Ward Health and Welfare Center	☎ 954-6146	FAX 953-7713	7 min. on foot from Tsurumigamine Stn. (Sotetsu)
Izumi Ward Health and Welfare Center	☎ 800-2445	FAX 800-2516	5 min. on foot from Izumichuo Stn. (Sotetsu)
Isogo Ward Health and Welfare Center	☎ 750-2445	FAX 750-2547	5 min. on foot from Isogo Stn. (JR)
Kanagawa Ward Health and Welfare Center	☎ 411-7138	FAX 316-7877	7 min. on foot from Higashi-Kanagawa Stn. (JR), Tammachi Stn. (Tokyu) and Nakakido Stn. (Keikyu)
Kanazawa Ward Health and Welfare Center	☎ 788-7840	FAX 784-4600	12 min. on foot from Kanazawabunko Stn. (Keikyu) and Kanazawa-hakkei Stn. (Keikyu, Seaside Line)
Konan Ward Health and Welfare Center	☎ 847-8438	FAX 846-5981	1 min. on foot from Konanchuo Stn. (municipal subway)
Kohoku Ward Health and Welfare Center	☎ 540-2362	FAX 540-2368	7 min. on foot from Okurayama Stn. (Tokyu)
Sakae Ward Health and Welfare Center	☎ 894-6964	FAX 895-1759	10 min. on foot from Hongodai Stn. (JR)
Seya Ward Health and Welfare Center	☎ 367-5744	FAX 365-5718	10 min. on foot from Mitsukyo Stn. (Sotetsu)
Tsuzuki Ward Health and Welfare Center	☎ 948-2350	FAX 948-2354	6 min. on foot from Center Minami Stn. (municipal subway)
Tsurumi Ward Health and Welfare Center	☎ 510-1832	FAX 510-1792	9 min. on foot from Tsurumi Stn. (JR), 7 min. on foot from Keikyu Tsurumi Stn. (Keikyu)
Totsuka Ward Health and Welfare Center	☎ 866-8426	FAX 865-3963	2 min. on foot from Totsuka Stn. (JR, municipal subway)
Naka Ward Health and Welfare Center	☎ 224-8332	FAX 224-8157	4 min. on foot from Nihon-odori Stn. (Minatomirai Line), 7 min. on foot from Kannai Stn. (JR, municipal subway)
Nishi Ward Health and Welfare Center	☎ 320-8439	FAX 324-3703	8 min. on foot from Tobe Stn. (Keikyu), 10 min. on foot from Hiranuma-bashi Stn. (Sotetsu)
Hodogaya Ward Health and Welfare Center	☎ 334-6345	FAX 333-6309	2 min. on foot from Hoshikawa Stn. (Sotetsu)
Midori Ward Health and Welfare Center	☎ 930-2357	FAX 930-2355	5 min. on foot from Nakayama Stn. (JR, municipal subway)
Minami Ward Health and Welfare Center	☎ 341-1185	FAX 341-1189	8 min. on foot from Bandobashi Stn. (municipal subway), 14 min. on foot from Koganecho Stn. (Keikyu)

Contact Information

[Contact the below for telephone inquiries]

Yokohama City Vaccination Call Center

Provides answers to questions regarding vaccinations performed
in Yokohama City.
Feel free to contact us.

- * Regarding the schedule for routine vaccinations
- * Regarding when the guide for vaccinations (pre-vaccination medical questionnaire (vaccination voucher)) will arrive, etc.

TEL : 045-330-8561

FAX : 045-664-7296

Open 9:00 a.m. to 5:00 p.m.
(closed on weekends and national holidays,
and during the New Year holiday period)

[Depending on the inquiry, procedures may be required at your ward Health and Welfare Center.]

(E.g.) * Individuals who want to get a vaccination outside of Yokohama City (including consultations regarding reimbursement payments)

* Individuals who have transferred to Yokohama from outside of the city who have not received the vaccinations that they are eligible for.

(For inquiries related to the above, refer to p. 25)

Related websites

1. **Yokohama City (Vaccinations):** contains information related to vaccinations



If the QR cannot be read, search for

Yokohama City + vaccinations

2. **Yokohama City Institute of Public Health:** contains information related to infectious diseases



If the QR cannot be read, search for

Yokohama City Institute of Public Health

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