Vaccination and Children's Health

2010 version

Written and edited: The Review Committee for Vaccination Guidelines
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Introduction
Children are often ill and sometimes become extremely sick; vaccination can protect them from several serious illnesses.
This brochure has been created to provide you with information about vaccination and to allow you to have your child vaccinated safely.
We hope that this brochure will enhance the health and growth of your child.

[Summary of the revised points in this version]
1. Vaccination age and intervals are presented in a two-color printing table, and the description is revised and presented more briefly.
2. In addition to the adverse reactions of vaccination, the severity of infections without vaccination and the effects of vaccination are simply and clearly described.
3 Japanese encephalitis
The description of the conventional vaccine, using mouse brain in the manufacturing process was deleted from the brochure because its shelf-life expired on March 9, 2010. The description of freeze-dried Japanese encephalitis vaccine is added to the brochure.
The government’s discussion regarding the vaccination system appropriate for future environments including positive recommendation of vaccination are described.
4. [Reference 1] “Novel influenza”
   To evaluate the countermeasures for the outbreak of novel influenza A (H1N1), an expert committee was established to discuss the issues of vaccination activities and vaccination system appropriate for recent environmental changes. The committee has proposed that a framework for “new extra vaccination” should be added in the Preventive Vaccination Law in order to cope with the outbreak of a new influenza similar to novel influenza A (H1N1). It is described that the government plans to discuss the vaccination system for the next season and after that.
5. [Reference 2] “Diseases preventable by voluntary vaccination and overview of vaccines”
   Since pediatric pneumococcal vaccine (heptavalent pneumococcal conjugate vaccine) was approved in February 2010, an overview of this disease and vaccine is described.
6. In addition, the terms, etc., were revised on the data of the latest administrative and medical information, knowledge and data.
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The 2010 edition is based on the information as of March 12, 2010.
You can ask the latest information to your municipality. It is available from the
websites of the Ministry of Heath, Labour and Welfare (http://www.mhlw.go.jp/) and
the Infectious Disease Surveillance Center, National Institute of Infectious Diseases
If descriptions in this brochure are changed in accordance with the amendment in
national laws and systems, the revision will be published and can be downloaded from
the website of the Foundation of Vaccination Research Center (http://www.yoboshu-
re.com/).
1. Get your child vaccinated!

The immunity to diseases which mothers give their infants almost completely disappears 3 months after birth for pertussis and 12 months after birth for measles. Consequently, after these periods, infants must ward off disease by producing their own immunity. Vaccination supports this defense.

Children go outside more often as they grow; consequently, they are at higher risk of infection. We recommend that you learn about vaccination and have your child vaccinated for his/her health.

2. What is vaccination?

Vaccination is the administration of weakened forms of infectious viruses and bacteria or of their toxins. Giving these weakened forms produces immunity against these diseases (for example, measles and pertussis). A “vaccine” is a preparation used for vaccination.

Vaccines cannot be prepared for all infectious diseases. Vaccines are difficult to produce for some viruses and bacteria.
3. Vaccination validity

Vaccination is performed to prevent a target disease; however, immunity is not established in some children because of their characteristics and physical condition. To confirm whether immunity has been established, the levels of antibody in the blood are measured with a blood test.

With inactivated vaccines, immunity gradually diminishes even after it has been established. To maintain immunity long term, boosters are required at specific intervals. (See “5. (3) Vaccine types and characteristics on Page4)

4. Children who are subjects of vaccination and vaccination schedule

Vaccination includes routine vaccination and voluntary vaccination (Page26). With regard to routine vaccination, the Preventive Vaccination Law defines the target diseases, subjects, and vaccination schedules.

Vaccination is carried out at an appropriate time, which depends on the disease. It is recommended to get your child vaccinated at a standard season.

See Page 6 for details of children who are subjects of routine vaccination and the standard vaccination schedule.

5. Let’s make a vaccination plan for your child

(1) Notice of vaccination

Routine vaccination is carried out by the municipal office in accordance with the Preventive Vaccination Law. A notice of vaccination is usually sent to parents/guardians individually. Since the notice is sent on the basis of the Basic Resident Register and the Foreigner Registration Card, make sure to report when a baby is born or when you move.
(2) Fill in a rough target date for vaccination.

The routine vaccination is, in principle, individually given. Consult your doctor to determine the schedule and order of vaccination considering the municipal programs, physical conditions of your child and disease epidemic. In many municipal programs, vaccination for polio and BCG is given collectively (vaccinated at a designated time and place such as healthcare center). Confirm your case.

(3) Vaccine types and characteristics

Vaccines are classified into 2 categories, i.e., live and inactivated vaccines. Live vaccines are made of attenuated live bacteria and viruses. The resistance (immunity) is established similarly to the course of the disease. Among vaccines used for routine vaccination, polio, measles and rubella (MR) combined, measles, rubella, and BCG vaccines are of this type (live vaccine). After vaccination, attenuated bacteria and viruses start growing; consequently, vaccines can cause mild symptoms, including fever and rash, which depend on vaccine. It takes about 1 month to establish sufficient resistance (immunity).

Inactivated vaccines are made from a virus or bacteria that have been killed, i.e., extracting components required for resistance (immunity), but eliminating toxicity. Among vaccines used for routine vaccination, diphtheria-pertussis-tetanus (DPT), diphtheria-tetanus (DT), and Japanese encephalitis vaccines are classified into this type. In these vaccines, bacteria and viruses do not multiply, and several shots are required to establish the resistance (immunity). Two or 3 vaccine shots are given at certain intervals to establish a basic resistance (immunity) and a booster is given about 1 year
after to enhance the resistance (immunity) to a sufficient level. However, the resistance (immunity) diminishes gradually. To keep the resistance (immunity) for a long time, a booster is required at certain intervals depending on vaccine characteristics.

(4) The intervals at which different vaccines are given to a child

Vaccines are classified as live or inactivated vaccines, and appropriate intervals at which different vaccines are given to a child must be maintained.

If your child urgently requires multiple, different vaccines, please consult a doctor.

If your child is to be vaccinated several times with the same vaccine, please make sure that the specified intervals are adhered to.

<table>
<thead>
<tr>
<th>Live vaccine</th>
<th>Inactivated vaccine</th>
<th>Live vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polio, measles-rubella (MR) combined, measles, rubella, BCG, varicella (chickenpox), mumps vaccines, etc. (only in cases of voluntary vaccination)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(When different vaccines are given to a child, the interval from the day following live vaccination to the day of another vaccination must be at least 27 days.)

<table>
<thead>
<tr>
<th>Inactivated vaccine</th>
<th>Inactivated vaccine</th>
<th>Live vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPT, DT, and Japanese encephalitis Tetanus, seasonal and novel influenza, Haemophilus influenzae type b (Hib), and pediatric pneumococcal (heptavalent pneumococcal conjugate) vaccines, etc. (only in cases of voluntary vaccination)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(When different vaccines are given to a child, the interval from the day following administration of an inactivated vaccine to the day of another vaccination must be at least 6 days.)

5. Let’s make a vaccination plan for your child
5. Let’s make a vaccination plan for your child

| Age | 3-month-old | 6-month-old | 9-month-old | 1-year-old | 2-year-old | 3-year-old | 4-year-old | 5-year-old | 6-year-old | 7-year-old | 8-year-old | 9-year-old | 10-year-old | 11-year-old | 12-year-old | 13-year-old | 14-year-old | 15-year-old | 16-year-old | 17-year-old | 18-year-old | 19-year-old |
|-----|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
|     | BCG/Bacille Calmette-Guérin | (See Page 11) | Diphtheria (D) | Pertussis (P) | Tetanus (T) | (See Page 13) | First phase (DPT•DT) | | | | | | | | | | | | | | | |
|     | Polio | (See Page 15) | Measles (M) | Rubella (R) | (MR•M•R) (see Page 17) | | Japanese encephalitis | (See Page 20) | | | | | | | | | | | | | | |

Three shots are given at intervals of 20–56 days (3–8 weeks) as the initial vaccination and a booster (once) is given 1 year or 1 year and 6 months after the completion of the initial vaccination.

Two injections are given at an interval of 41 days (6 weeks) or more.

Two injections are given at an interval of 6 to 28 days (1 to 4 weeks) as the initial vaccination of Phase 1; a booster is given about 1 year after the completion of the initial vaccination of Phase 1.

The term ☐☐ presents the age of children who are subjects of routine vaccination in accordance with the Preventive Vaccination Law. However, considering the period during which children are likely to have infections, vaccination in the term ☐☐ is recommended. Therefore, please make your child receive vaccinations in this term as much as possible. The arrow (↓) presents a desirable period for vaccination.

* MR vaccine Phases 3 and 4

MR Phases 3 and 4 are vaccination for children at the age corresponding to the first grade of junior high school and the third grade of high school, respectively; however, children who will receive Phases 1 and 2 do not receive Phases 3 and 4.

* The interval of vaccination

The interval of vaccination is defined as the number of days by regulations. For example, “the interval of one week” means “on the same day of the next week or later”.

* If your child happened to:
  * have pertussis before DPT vaccination, see Pages 14–15,
  * have measles or rubella before MR vaccination, see Pages 19–20.
5. Let’s make a vaccination plan for your child

Your child’s date of birth:   (day) /   (month) /   (year)

<table>
<thead>
<tr>
<th>Vaccination</th>
<th>Target date</th>
<th>Vaccination date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuberculosis (BCG)</td>
<td>From about (d/m/y) to about (d/m/y)</td>
<td>(d/m/y)</td>
</tr>
<tr>
<td>DPT•DT Phase 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First administration</td>
<td>From about (d/m/y) to about (d/m/y)</td>
<td>(d/m/y)</td>
</tr>
<tr>
<td>Second administration</td>
<td>From about (d/m/y) to about (d/m/y)</td>
<td>(d/m/y)</td>
</tr>
<tr>
<td>Third administration</td>
<td>From about (d/m/y) to about (d/m/y)</td>
<td>(d/m/y)</td>
</tr>
</tbody>
</table>

Note) If DT is used for the initial vaccination in Phase 1, the vaccination is conducted with 2 shots.

| DPT•DT Phase 1 addition      | From about (d/m/y) to about (d/m/y) | (d/m/y) |

| DT Phase 2                   | From about (d/m/y) to about (d/m/y) | (d/m/y) |

| Polio                        |                    |                  |
| First administration         | From about (d/m/y) to about (d/m/y) | (d/m/y) |
| Second administration        | From about (d/m/y) to about (d/m/y) | (d/m/y) |

| MR•M•R                       |                    |                  |
| Phase 1                      | From about (d/m/y) to about (d/m/y) | (d/m/y) |
| Phase 2                      | From about (d/m/y) to about (d/m/y) | (d/m/y) |

Note) For Phases 3 and 4, add vaccination as required.

| Japanese encephalitis        |                    |                  |
| Phase 1                      | From about (d/m/y) to about (d/m/y) | (d/m/y) |
| Phase 1 addition             | From about (d/m/y) to about (d/m/y) | (d/m/y) |
| Phase 2                      | From about (d/m/y) to about (d/m/y) | (d/m/y) |

* Fill in a rough target date for vaccination in accordance with the table on the left.
6. Before having your child vaccinated

Please confirm the following before vaccination.

1. Is your child in good health?
2. Do you understand the necessity for vaccination and the benefits and possible risks (side effects) of the vaccine that will be given to your child today?
   If you have any questions, please write them down.
3. Do you carry a maternal and child health handbook with you?
4. Did you complete a screening questionnaire for vaccination?

(1) General precautions

Vaccination should be performed when your child is in good health. Always take note of the physical condition and characteristics of your child. If you have any concerns, do not hesitate to consult your doctor, healthcare center, or the municipal office in charge, in advance.

To have your child vaccinated safely, we recommend that you decide on the day of vaccination, taking the following into consideration:

1) Observe your child carefully from the morning on the day of vaccination, and confirm that he/she is well.
   Even if vaccination is scheduled, if your child appears sick, consult your doctor and decide whether your child should be vaccinated or not.
2) Thoroughly read the information about vaccination provided by the municipal office, so that you fully understand the necessity and side effects of the vaccines. If you have any questions, ask the doctor who is to vaccinate your child, before vaccination.
3) Make sure to bring a maternal and child health handbook.
4) The screening questionnaire contains important information for the doctor in charge of vaccination. Please fill in the form completely and accurately.
5) We recommend that the child being vaccinated be accompanied by a parent/guardian who is familiar with the child's usual physical condition. A child can only be vaccinated if a parent/guardian fully understands the benefits and side effects of vaccination and agrees to have the child vaccinated.

(2) The following persons cannot receive vaccination:

1) A child with obvious fever (37.5°C or higher)
2) A child with a severe acute illness
   No child being treated with a medication for an acute, severe illness should receive vaccination.
3) A child who has had anaphylaxis to any component of the vaccine preparation to be given on that day. “Anaphylaxis” is an acute, severe systemic allergic reaction, usually within 30 minutes after vaccination, including excessive sweating, a swollen face, systemic severe urticaria, nausea, vomiting, hoarseness, and respiratory distress, resulting in shock.
4) Pregnant women should not receive polio, measles or rubella vaccine.
   This is a regulation not directly involving children but important for persons who receive voluntary vaccination.
5) In BCG vaccination, a child with predisposition to keroid.
6) Other conditions that a doctor considers inappropriate.
   Even if your child does not meet the above criteria, he/she cannot be vaccinated if a doctor decides that doing so would be inappropriate.

(3) Children who require careful consideration in receiving a vaccination

A child meeting the following criteria should be checked by his/her doctor before vaccination, and the advisability of vaccination should be determined. When the child receives a vaccination, it is recommended that the doctor administer the vaccine, or provide a medical certificate or a written doctor’s opinion.
6. Before having your child vaccinated

1) A child who is being treated for a heart, kidney, liver, or blood disease, or a developmental disorder.
2) A child who has had a fever within 2 days of a previous vaccination or an allergic reaction, including rash and urticaria.
3) A child who has had a seizure in the past
   A decision whether a child should be vaccinated depends on the age at which the seizure occurred, the presence or absence of fever, subsequent seizures, and the type of vaccine. Please consult the child’s doctor before vaccination.
4) A child who has had immunodeficiency diagnosed in the past or has a family member or relative with immunodeficiency. (For example, a person who repeatedly had a perianal abscess as a baby)
5) A child with allergy to vaccine components, for example, egg, antibiotics, the stabilizers used in any step of vaccine production.
6) With BCG vaccination, a child who is suspected to be infected with tuberculosis already, for example, a child who has been in prolonged contact with a family member with tuberculosis.

(4) General precautions after receiving vaccination

1) For 30 minutes after the vaccination, observe your child at a medical institution or stay near the doctor. Acute side effects often develop during that time.
2) Watch for possible side effects for up to 4 weeks (live vaccines) or 1 week (inactivated vaccines) after vaccination.
3) Keep the vaccination site clean. Bathing is allowed, but avoid rubbing the vaccination site.
4) Avoid strenuous physical activity on the day of vaccination.
5) If a child has an abnormal reaction at the vaccination site or has a change in physical condition after vaccination, consult a doctor immediately.
Some parents have negative attitudes toward vaccination because of concerns about side effects. However, vaccines currently used in Japan are preeminent and cause less adverse reactions. Each child has a different response; some children, therefore, occasionally have side effects, the severity of which varies. It is important for you to decide whether to have your child vaccinated after detailed consultation with your doctor, who understands the physical status of your child.

♦ Tuberculosis

(1) Cause and course
Tuberculosis is caused by mycobacterium tuberculosis. Although the number of tuberculosis patients has markedly reduced in Japan, more than 20,000 people are newly diagnosed with tuberculosis every year and the disease can be transmitted to children from adults. Immunity against tuberculosis cannot be transferred from the mother to the fetus; consequently, newborns are at risk of infection. Infants and children have low immunity against tuberculosis; as a result, they sometimes contract systemic tuberculosis or tuberculous meningitis, resulting in severe sequelae.
It is recommended to receive BCG vaccination within 6 months after birth because the BCG vaccine has an effect of protecting infants who are likely to be in serious conditions such as meningitis and miliary tuberculosis.
However, a child with congenital immunodeficiency often has severe adverse reactions; therefore, BCG vaccination is usually conducted in children 3 months after birth.

(2) BCG vaccine (live vaccine)
BCG vaccine is made from attenuated Mycobacterium bovis.
The method of BCG vaccination is an intradermal injection using an apparatus with multiple needles that is pressed twice on the upper arm. The vaccine should not be given elsewhere on the body because of possible side effects, including keloid formation. The vaccination site should be dried in the shade for about 10 minutes.
Red pockmarks appear on the vaccination site around 10 days after vaccination, and some of them discharge pus. This reaction peaks about 4 weeks after vaccination; subsequently, the pockmarks are covered with scabs and heal completely up to 3 months after vaccination, leaving tiny scars. This scarring is not an abnormal reaction but evidence that a person has acquired immunity through the BCG vaccination. Keep the vaccination site clean, without a bandage or plaster, because it will heal spontaneously. However, if the vaccination site is still oozing 3 months after vaccination, please consult a doctor.

Another possible side effect is axillary lymph nodes swelling, occasionally seen on the same side as the vaccination. This reaction can generally be left untreated; however, if the area is tender, severely swollen, or suppurative, please consult a doctor.

If your child is already infected with tuberculosis, within 10 days of vaccination you may observe the Koch phenomenon (a series of reactions, including local redness, swelling, and suppuration at the injection site, which generally heal after 2 to 4 weeks, with scarring). This adverse reaction appears in the early stage, i.e., several days after vaccination, which is different from the usual adverse reaction on the vaccination site (occurring in around 10 days). If you find the Koch phenomenon, immediately consult your municipal office or a medical institution. In these circumstances, we also recommend that any family member who might have infected your child with tuberculosis should consult a medical institution.

### (3) Vaccination schedule

| Age       | 3-month-old | 6-month-old | 9-month-old | 1-year-old | 2-year-old | 3-year-old | 4-year-old | 5-year-old | 6-year-old | 7-year-old | 8-year-old | 9-year-old | 10-year-old | 11-year-old | 12-year-old | 13-year-old | 14-year-old | 15-year-old |
|-----------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| **BCG**   | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) | ![BCG](image) |

It is actually recommended to receive vaccination around 3 months after birth. Children are allowed to receive vaccination until 1 year after birth due to inevitable reasons (geographical and transportation conditions, disaster, and other special reasons) but not due to personal reasons.
7. Diseases preventable by vaccination and vaccines

Diphtheria, pertussis, and tetanus

(1) Cause and course

(a) Diphtheria

Diphtheria is caused by Corynebacterium diphtheriae and is spread by droplet infection.

The current diphtheria-pertussis-tetanus (DPT) vaccines have been in use since 1981. No more than one case of diphtheria is identified each year. Of infected persons only 10% have symptoms, and others are asymptomatic carriers who can spread diphtheria. The bacterium lives mainly in the throat but also lives in the nose. Symptoms include high fever, sore throat, a barking cough, and vomiting; a false membrane is formed, which can cause asphyxia. Patients must be monitored carefully because the bacterium produces a toxin that can cause a serious myocardial disorder or paralysis 2 to 3 weeks after the development of symptoms.

(b) Pertussis

Pertussis is caused by Bordetella pertussis and is spread by droplet infection.

The number of cases of pertussis has decreased since pertussis vaccination started in 1948. However, pertussis, which is characterized by prolonged cough, recently occurs in adolescents and adults. Much attention should be paid to it because they can be source of infection in infants and some of infected infants result in serious conditions. Pertussis begins with symptoms mimicking a common cold. The child then begins to cough violently and repeatedly, with a flushed face. After coughing, the patient is forced to inhale with a whooping sound. Usually, fever does not develop. Infants sometimes present with blue lips (cyanosis) and seizures (fits) because breathing is interrupted by coughs. Severe complications include pneumonia and encephalopathy. Infants sometimes die of this disease.

- Droplet infection

Droplet infection means transmission of viruses and bacteria through coughing and sneezing. Viruses and bacteria in the saliva and in airway secretions are spread through the air to people within 1 meter.
(c) Tetanus
Clostridium tetani does not spread from person to person. The bacteria are usually found in soil and enter the body through wounds in the skin. The bacteria multiply in the body and produce a toxin, causing muscle spasm. Lockjaw is an earlier symptom; subsequently, generalized seizure occurs, and delayed treatment sometimes results in a patient’s death. Most patients are infected through a small skin wound not detected by themselves or people around them. Children always have a chance to be exposed to the bacteria, which are usually found in soil. If a mother has immunity against the toxin, a newborn is protected from tetanus during delivery.

(2) DPT (Diphtheria-Pertussis-Tetanus) and Diphtheria-tetanus (DT) combined vaccine (inactivated vaccine)

The three shots of Phase 1 are given at intervals of 20 to 56 days (3 to 8 weeks) as the initial vaccination, and a booster is given 6 months or more after completion of the initial vaccination (3 shots).

In the use of diphtheria-tetanus (DT) combined vaccine, 2 shots of Phase 1 are given at intervals of 20–56 days (3–8 weeks) as the initial vaccination and a booster (once) is given at least 6 months after the completion of the initial vaccination (2 shots).

Persons who have had diphtheria, pertussis, or tetanus can receive DPT vaccine.

The one shot of Phase 2 (diphtheria-tetanus combined vaccine) is given at the age of 11 years.

Keep in mind not to miss vaccination, as multiple injections are required.

To acquire sufficient immunity, your child must be vaccinated according to the schedule. When the interval between injections is longer than that specified, consult with your doctor and the municipal office.

The vaccine now used in Japan causes fewer side effects than did earlier vaccines. The 2007 Summary Report of the Review Meeting on Surveys on Adverse Reactions and Health Status after Vaccination from 1996 to 2007 (hereafter called as Summary Report of Review Meeting on Health Status Survey) showed that major adverse reactions associated with the DPT vaccine were local reactions including redness, swelling (puffiness), and induration (hard spot) at the injection site. Although the incidences of reactions differ, the incidences were about 11.8% within 7 days of the first shot of the initial vaccination and about 39.4% within 7 days of the booster.
It was found that major adverse reactions in DT phase 2 were local reactions, including redness, swelling (puffiness), and induration (hard spot) at the injection site. The incidences were about 30.4% within 7 days of vaccination.

Induration gradually decreases but can remain for several months. Some hypersensitive children also have swelling that can involve the entire arm. High fever usually does not develop; however, about 0.3% of the children got a fever of over 37.5°C within 24 h of DPT vaccination and about 0.1% of those in DT vaccination. When your child is cranky or a swelling occurs, even if without serious side effect, consult with a doctor. Diphtheria, pertussis, and tetanus are serious diseases; therefore, it is recommended to receive vaccination for prevention.

(3) Vaccination schedule

| Note 1) The standard vaccination for booster of Phase 1 DPT and DT (booster) is scheduled at 12–18 months after the completion of the initial vaccination of Phase I (3 shots; if DT is used for the initial vaccination of Phase 1, 2 shots).
| Note 2) DPT and DT can also be used for children who already had pertussis. If DT is used, the initial vaccination is conducted with 2 shots. DPT and DT can also be used for children who already had diphtheria or tetanus.
| Note 3) In the Phase 1 initial vaccination, the same type of vaccine is given at designated times.

♦ Polio (acute poliomyelitis)

(1) Cause and course

Polio (acute poliomyelitis) is also known as “infantile paralysis” and its epidemics had also occurred repeatedly in Japan until the early 1960s. Owing to vaccination, no
patient with paralysis due to wild-type poliovirus has been found since 1980; therefore, the World Health Organization (WHO) declared the eradication of poliomyelitis from the Western Pacific Region including Japan in 2000. However, poliomyelitis due to wild-type poliovirus currently occurs in India, Pakistan, Afghanistan, and Nigeria, and poliovirus spread over from these countries to countries where no patient infected with wild-type poliovirus had been once found, thereby resulting in recurrence of poliomyelitis. Therefore, the possibility remains that Japanese people are infected with poliovirus in these countries or poliovirus spreads over into Japan.

Poliovirus is taken through the mouth and proliferates in pharyngeal and small intestinal cells. Poliovirus is considered to proliferate for 4–35 days (mean: 7–14 days) in small intestinal cells. Viruses proliferated are excreted in feces and taken through the mouth of a person with no resistance (immunity) to poliovirus, repeating infection from person to person. Most children who are infected with poliovirus are asymptomatic and get lifelong protection (lifelong immunity). In some children with symptoms, the virus spreads to the brain and spinal cord, thereby causing paralysis. Of 100 children infected with poliovirus, 5–10 have the symptoms of a common cold, accompanied by fever, followed by headache and vomiting. About 1 of 1000–2000 children infected with poliovirus has limb paralysis. Some of them are permanently paralyzed or suffer from progression of symptoms and sometimes die of respiratory distress.

(2) Polio vaccine (live oral vaccine)

Polio vaccine contains 3 types of polio virus, i.e., polio virus types I, II, and III. Vaccination gives your child immunity against each type of virus. However, the first administration may provide immunity against only 1 or 2 types of polio virus. Therefore, administering the vaccine a second time can provide immunity against other types of virus which was not achieved by the first administration. An interval of at least 41 days (6 weeks) is needed between the first and second vaccinations. Immunity acquired with live polio vaccination is considered to persist throughout life. When your child has severe diarrhea, postpone vaccination because diarrhea reduces the effectiveness of vaccination. Vaccine is safe because the virus is attenuated. However, the vaccine-derived polio virus sometimes increases its virulence in the body after administration; in
extremely rare cases (about 1/4,860,000 vaccinations), the vaccine-derived polio virus causes paralysis. WHO considers that it occurs more frequently (2–4/1,000,000 vaccinations).

In addition, the virus is excreted into the feces for 15 to 37 days (mean: 26 days) after vaccination. This virus rarely causes paralysis (Secondary infection) in another person without immunity against polio virus (a person who has not been vaccinated) or in those with low immunity. The incidence varies between countries; however, in Japan, it is extremely rare, (about 1/7,890,000 vaccinations). Therefore, please give much attention after changing a diaper, for example, wash your hands well. The relief system supports people with impaired health due to secondary infection with polio vaccine.

It is recommended that persons who were born between 1975 and 1977 should receive polio vaccine (voluntary vaccination) again because those who have immunity against polio are fewer in this generation than those in other generations in the following opportunities:

1. When you go to a country where poliovirus exist in, or
2. When your child receives a polio vaccine.

(3) Vaccination schedule

| Age      | 3-month-old | 6-month-old | 9-month-old | 1-year-old | 2-year-old | 3-year-old | 4-year-old | 5-year-old | 6-year-old | 7-year-old | 8-year-old | 9-year-old | 10-year-old | 11-year-old | 12-year-old | 13-year-old | 14-year-old | 15-year-old |
|----------|-------------|-------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Polio    |             |             |             |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |

Two shots are given at an interval of 41 days (6 weeks) or more.

♦ Measles and rubella

(1) Cause and course

(a) Measles

Measles is caused by the measles virus, which spreads through the air. Measles is so contagious that any person who is exposed to the virus and is not immune will probably get the disease. The main symptoms are fever, cough, runny nose, eye discharge, and rash. For the first 3 to 4 days, patients have a fever of 38°C, which
appears to decline but increases again to 39°C to 40°C, with a rash over the entire body. The fever goes down within 3 to 4 days, and the rash gradually disappears. The parts affected by the rash may remain darker for a while.

The main complications are bronchitis, pneumonia, otitis media, and encephalitis. About 7 to 9 out of 100 children with measles also get otitis media and about 1 to 6 get pneumonia. One to 2 out of 1,000 get encephalitis. Subacute sclerosing panencephalitis (SSPE), i.e., encephalitis taking a chronic course, develops in 1–2 per 100,000 children. Persons who did not receive measles vaccine die of measles infection and its mortality rate is 1 out of several thousands persons.

(b) Rubella

Rubella is caused by the rubella virus and is spread by droplet infection. The incubation period is 2 to 3 weeks. The disease develops with mild cold-like symptoms, and the main symptoms are rash, fever, and posterior cervical lymphadenopathy (lymph nodes swelling in the back of the throat). Conjunctival congestion also occurs. Because both rash and fever disappear within about 3 days, rubella is also called “three-day measles.” The complications are joint pain, thrombocytopenic purpura, and encephalitis. About 1 of every 3,000 patients get thrombocytopenic purpura, and 1 in 6,000 get encephalitis. Adult patients have severe symptoms.

When pregnant women contract rubella during the early stage of pregnancy, their infants are likely to be born with the congenital rubella syndrome, which is characterized by abnormalities such as cardiac defects, cataracts, and deafness.

(2) Measles and rubella (MR) combined, measles (M), and rubella(R) vaccines (live vaccines)

Measles and rubella (MR) combined vaccine contains live, attenuated measles and rubella viruses.
Because children are most likely to be infected with measles and rubella at the age of 1 to 2 years, we recommend you have your child vaccinated (Phase 1) as early as possible after the age of 1 year.

Monovalent formulation vaccine (such as measles only) gives immunity to more than 95% of children who receive a vaccine; however, second dose of vaccine has been introduced to cover the failure in immunity and prevent the immunity from diminishing with age.

Even when a child has been vaccinated with measles and rubella vaccine when younger than 1 year, he/she can be vaccinated routinely at the scheduled age specified in Phase 1.

Phase 2 vaccination is given to a child in the year before starting primary school, i.e., the last year of a kindergarten or nursery school.

Phase 3 vaccination is given to a child who turns 13 years old during the first year of junior high school.

Phase 4 vaccination is given to a child who turns 18 years old during the third year of high school.

Phase 3 and 4 vaccination is implemented for the 5 years from 2008 through 2012.

It is recommended that you have your child vaccinated in April, May, or June.

Simultaneous vaccination for measles and rubella in Phases 1, 2, 3 or 4 is performed with the measles-rubella (MR) combined vaccine.

Individuals who had either measles or rubella before can receive measles-rubella (MR) combined vaccine.

If your child has been treated with gamma globulin injections, please consult your doctor before vaccination.

The Summary Report of Review Meeting on Health Status Survey showed that major side effects of MR combined vaccine are fever and rash. In Phase 1, fever developing first during the observation period (0–28 days) was found in about 20.5% of the children and high fever of 38.5°C or more was observed in about 12.8%. In Phase 2, fever developing first during the observation period (0–28 days) was found in about 7.3% of the children and high fever of 38.5°C or more was observed in about 4.1%.

A rash develops in about 6.0% and 1.5% of them in Phases 1 and 2, respectively.

Other side effects are local reactions including redness, swelling, and induration (hard
spot) in the injection site, and urticaria, swollen lymph nodes, joint pain, and febrile seizure. The data concerning side effects by measles and rubella vaccines shows that anaphylaxis, thrombocytopenic purpura, encephalitis, and seizure rarely occur. Febrile seizures (seizures caused by a fever) have occasionally (about 1 child in 300 children) been reported after measles vaccination. In addition, there have been reports of children getting encephalitis/encephalopathy (1 child or less in 1–1.5 million children). Rubella vaccine is a live vaccine and the rubella virus multiplies in the body similarly to the measles virus; a vaccinated person does not infect those around. Some of the persons who have measles have progression in symptoms, resulting in death. Women who get rubella during pregnancy are sometimes likely to have infants with congenital rubella syndrome associated with congenital heart disease, cataracts, retinopathy, deafness, and mental retardation. It is recommended for women to receive vaccination to prevent their child from the disease because both mother and child go through a difficult time.

(3) Vaccination schedule

<table>
<thead>
<tr>
<th>Age (year-old)</th>
<th>Measles • Rubella (MR•M•R) Note 1), Note 2)</th>
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<td>18-year-old</td>
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<td>19-year-old</td>
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Note 1) Simultaneous vaccination for measles and rubella in Phase 1, 2, 3, or 4 is performed by measles-rubella (MR) combined vaccine. Phase 3 and 4 vaccinations are implemented for 5 years after 2008. Note 2) Individuals who had either measles or rubella before can receive measles-rubella (MR) combined vaccine or a vaccine for uninfected disease.

♦ Japanese encephalitis

(1) Cause and course

Japanese encephalitis is caused by the Japanese encephalitis virus. Japanese
Encephalitis virus is transmitted by mosquitoes carrying viruses that multiply in pigs. After a 7- to 10-day incubation period, high fever, headache, vomiting, impaired consciousness, and convulsions occur, all symptoms of acute encephalitis. Japanese encephalitis does not spread from person to person. Most epidemics occur in western Japan, but the virus is found all over the country except Hokkaido. An outbreak occurs in domestic pigs from June to October every year, affecting about 80% or more of pigs in certain areas. Japanese encephalitis was once common in infants and school children, but its incidence has been reduced by widespread vaccination; recently, most patients have been unvaccinated elderly persons. Encephalitis develops in 1 of every 100 to 1,000 persons infected with the virus. Some persons have meningitis and summer cold-like symptoms alone. The mortality of patients with encephalitis is about 20–40%, and many of them have neurologic sequelae.

(2) Freeze-dried Japanese encephalitis vaccine (inactivated vaccine)

Freeze-dried Japanese encephalitis vaccine is made from Japanese encephalitis viruses that are proliferated in Vero cells, killed (inactivated) with formalin, and purified. As of 2010, it is provided to strongly recommend the initial vaccination (2 shots) in children aged 3 years.

You can ask questions for vaccination and the latest information to your municipality. The Q&A is available from the website of the Ministry of Heath, Labour and Welfare, “Q&A on vaccination of Japanese encephalitis (http://www.mhlw.go.jp/qa/kenkou/nouen/index.html).
If the descriptions of vaccination of Japanese encephalitis are changed, it will be notified on the website of the Foundation of Vaccination Research Center (http://www.yoboseshu-rc.com/).
7. Diseases preventable by vaccination and vaccines

- **Acute disseminated encephalomyelitis (ADEM)**

This disease is a central nervous system-related disease that generally develops after viral infection, and extremely rarely develops after vaccination. Fever, headache, convulsions, and movement disorders occur several days to several weeks after vaccination. Most patients are improved by steroid therapy; however, about 10% of them have neurologic sequelae, including movement disorder and abnormal electroencephalogram.

(3) Vaccination schedule

| Age (year-old) | 3-month-old | 6-month-old | 9-month-old | 1-year-old | 2-year-old | 3-year-old | 4-year-old | 5-year-old | 6-year-old | 7-year-old | 8-year-old | 9-year-old | 10-year-old | 11-year-old | 12-year-old | 13-year-old | 14-year-old | 15-year-old |
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| Japanese encephalitis | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating | 🟢.activating |

Note) Freeze-dried Japanese encephalitis vaccine can be used only for vaccination in Phase 1.
8. What to do if your child has a side effect from the vaccination

(1) Usual reactions
Depending on the type of vaccine, fever, redness, swelling and induration at the injection site and rash occur fairly often. In many cases, these symptoms disappear within several days and are not a cause for concern.

(2) Serious side effects
If your child has severe swelling at the vaccination site, or has fever or seizures after vaccination, consult a doctor. If your child’s symptoms meet the criteria for notification of side effects after vaccination, the doctor will inform the municipal government of these side effects.

Although side effects depend on the type of vaccine, vaccination extremely rarely (about 1 in 1 to 2 million) causes serious side effects, such as encephalitis and neuropathy. In such cases, under the Preventive Vaccination Law the Ministry of Health, Labour and Welfare considers the patient to have been injured by routine vaccination, and the patient is then compensated by the government according to this law.

(3) Coincidental reactions
Symptoms that occur soon after vaccination are often thought to have been caused by vaccination. However, sometimes these symptoms are caused by another infection that happens to develop simultaneously. This is then called a “coincidental reaction.”

(4) The relief system supporting people with impaired health due to vaccination
1) A person who has side effects due to routine vaccination and requires treatment at a medical institution, or whose ability to perform daily activities is impaired due to health injury can be compensated by the government according to the Preventive Vaccination Law.
2) The compensation consists of payment of medical expenses, medical benefits, a disabled child’s annuity, a disability annuity, lump-sum death benefits, and funeral expenses, all of which are designated by law according to the severity of the health injury. All compensation, except lump-sum death benefits and funeral
expenses, is continually paid until the completion of treatment or improvement in the health injury.

3) Compensation is paid to the patient after the relevant injury has been certified to be caused by vaccination, by the governmental review committee comprising specialists in vaccination, infection medicine, law, and related disciplines, who discuss the causal relationship of the relevant injury with vaccination, i.e., whether the relevant injury is caused by vaccination or other factors (infection before or after vaccination, or other causes).

4) When a child wishes to be vaccinated after the designated period, vaccination is considered not to be controlled under the Preventive Vaccination Law (voluntary vaccination). In case a child is injured by vaccination, he/she is supported by compensation according to the Pharmaceuticals and Medical Devices Agency Law; however, the subject and the amount of compensation depend on diseases, which is different from compensation by the Preventive Vaccination Law.

* If you need to submit an application for compensation, consult the doctor who interviewed your child before vaccination, the healthcare center, and the municipal office in charge of vaccination.

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**Reference 1** Novel influenza

1. **Cause and course**

Novel influenza is antigenically different from seasonal influenza and many people have not acquired immunity against this influenza; consequently, it rapidly spreads around the country and has great effects on people’s lives and health.

Novel influenza A (H1N1) that emerged in 2009 causes symptoms, including sudden fever, cough, sore throat, malaise, runny or stuffy nose, and headache, which are similar to the symptoms of seasonal influenza, and symptoms in many patients are mild and the patients immediately recover.

2. **Course in the outbreak year (2009)**

In April 2009, the outbreak of novel influenza A (H1N1) was confirmed in North America and the development of vaccines for novel influenza started using viruses obtained from infected patients. Also in Japan, the production of vaccines for novel
influenza started from mid-July, and about 54 million vaccines were manufactured until March 2010. Vaccines from foreign manufacturers were imported because it was assumed that domestic manufacturers could not produce the vaccines required.

The production of novel influenza vaccines was not sufficient; consequently, the priority of subjects of vaccination was established. The aim of vaccination was considered to “decrease deaths and severe morbidity as much as possible” and “ensure the medical system.” Consequently, the priority for vaccination included medical staff, patients with underlying disease who had a risk for severe morbidity, pregnant women and early elementary school children, followed by late elementary school children, junior high school students, high school students or persons at an equivalent age, and the elderly (65 years old or more), and all the people were allowed to receive vaccination in January 2010.

Vaccination started in mid-October, and a law for the relief system for injury to health with vaccination was made to establish an appropriate relief system.

3. Future actions

To evaluate the countermeasures for the outbreak of novel influenza A (H1N1) in 2009, an expert committee was established to discuss issues of vaccination activities and the vaccination system appropriate for recent environmental changes. The committee has proposed that a framework for “new extra vaccination” should be added in the Preventive Vaccination Law in order to cope with the outbreak of a new influenza with similar manifestations and epidemics to novel influenza A (H1N1) in 2009 (As of 19th Feb. 2010).

The government plans to discuss the vaccination system in the next season and after that.

* You can ask questions for novel influenza and the latest information to your municipality. The Q&A is available from the websites of the Ministry of Health, Labour and Welfare (http://www.mhlw.go.jp/) and the Infectious Disease Surveillance Center, National Institute of Infectious Diseases (http://idsc.nih.go.jp/index-j.html).
[Reference 2] Diseases preventable by voluntary vaccination and overview of vaccines

Voluntary vaccination is conducted by consultation between a vaccine recipient and a doctor and is not recommended by the government; however, vaccines used are approved by the Ministry of Health, Labour, and Welfare under the Pharmaceutical Affairs Law.

Vaccines used for voluntary vaccination include seasonal influenza, mumps, varicella (chickenpox), hepatitis A and B, rabies, multivalent pneumococcal capsule polysaccharide (23-valent), tetanus, cholera, yellow fever, Haemophilus influenzae type b (Hib), pediatric pneumococcal (heptavalent pneumococcal conjugate), cervical cancer, and Weil’s disease-Leptospira interrogans combined vaccines. Seasonal influenza, mumps, varicella (chickenpox), and Haemophilus influenzae type b (Hib) vaccines that many children receive, and pediatric pneumococcal vaccine (heptavalent pneumococcal conjugate vaccine) that has recently been approved are explained below.

◊ Seasonal influenza vaccine

Seasonal influenza vaccination for the elderly is designated as routine vaccination by the Preventive Vaccination Law; on the other hand, that for children is voluntary vaccination.

(1) Cause and course

Seasonal influenza is an acute respiratory infection and suddenly develops systemic symptoms including fever, chill, headache, and muscle pain. The incubation period is 24–72 h. Respiratory symptoms (stuffy nose, sore throat, and cough etc.) often appear later. Patients without complications recover within 2–7 days. Complications, especially pneumonia and encephalopathy, are severe.

(2) Overview of vaccine

This is a formalin-inactivated vaccine containing seasonal influenza A (H1N1) and A (H3N2) and B viruses that are inoculated and proliferated separately in the chorioallantoic membrane of embryonated chicken eggs, and HA components are collected with ether. Viral strains in seasonal influenza vaccine are estimated and selected each year considering the epidemics of seasonal influenza.

The prevention effect in children aged from 1 year to less than 6 years is around 30% in Japan; however, severe conditions such as pneumonia can be prevented.
Embryonated chicken eggs are used in the manufacturing process of seasonal influenza vaccine; however, the egg components are eliminated in the purification process. Nevertheless, much attention should be paid to vaccination in persons with apparent egg allergy. Persons with anaphylactic reaction to chicken egg and meat cannot receive vaccination.

◊ **Mumps vaccine**

(1) **Cause and course**

Mumps is caused by the mumps virus and is spread by droplet infection. The viruses proliferate and spread over the body and involve organs. The incubation period is 2–3 weeks. The period of communicability ranges from several days before onset to the disappearance of major symptoms. The major symptom is swelling of the parotid glands showing even and soft painful swelling with vague margins. Swelling of the submaxillary and sublingual glands is sometimes observed. Fever is often found. Older children and adults have significant clinical symptoms and frequently suffer complications. The most common complication is aseptic meningitis that develops in 1–3% of the patients. In addition, encephalitis and pancreatitis are rarely occurred. Some of the men have orchitis, often resulting in sterility. Recent attention is given to the deafness.

(2) **Overview of vaccine**

This is a live vaccine containing attenuated mumps viruses. The efficacy of disease prevention is about 90%. The antibody titer acquired is slightly low; however, it persists well.

The adverse reaction of mumps vaccine available in the market is mild swelling of the parotid glands in 1% of the individuals who received this vaccine. The incidence of aseptic meningitis is about 1/2,000–3,000 vaccinations. Since the incidence of aseptic meningitis is in 1–3% of the patients naturally infected and mumps is sometimes complicated by deafness, and, children are forced to be absent from nurseries and schools for a fairly long time, it is recommended to receive mumps vaccine around the age of 3 years after receiving DPT Phase 1, MR combined vaccines and varicella (chickenpox) vaccine.

◊ **Varicella (chickenpox) vaccine**

(1) **Cause and course**

Varicella is caused by varicella-zoster virus and is spread by contact, droplet and
airborne infection. The incubation period is 13–17 days. The major symptom is characteristic rash with itching. Each lesion starts as a maculopapule and passes through the stage of vesicle after 3–4 days and granular crust finally. The crust drops and heals. Many rashes appear in the body regions covered by clothes; however, some appear in the scalp.
Moderate fever is occasionally found. This is generally a mild disease; however, it is more severe in immunocompromised patients and is sometimes complicated by encephalitis. Varicella is one of the most contagious diseases; therefore, patients are restricted to go to nurseries, preschools, and schools until submitting a proof of cure under the School Health and Safety Act.

(2) Overview of vaccine

This is a live vaccine containing attenuated varicella-zoster viruses. Varicella vaccine has less effect than live measles and rubella vaccines. About 20% of the individuals who received this vaccine have varicella (chickenpox) but a mild one later (disease prevention rate: 80%).

If a person who had a contact with a patient with varicella receives vaccination within 3 days after contact, the secondary infection can be prevented; therefore, the vaccine is used for prevention of nosocomial infection.

Almost no adverse reactions are found in healthy children and adults; however, fever and rash occasionally develop and local redness, swelling (puffiness), and induration (hard spot) are observed in rare cases.

It is recommended to receive varicella vaccine as soon as possible 4 weeks or more after receiving the MR combined vaccine.

◊ Haemophilus influenzae type b (Hib) vaccine

(1) Cause and course

Haemophilus influenzae, especially serotype b, causes not only superficial infection, including otitis media, sinusitis, and bronchitis but also serious deep (systemic) infection, including meningitis, sepsis, and pneumonia.

A retrospective study from 1996 to 1998 and a prospective study in Japan showed that the incidence of meningitis caused by Haemophilus influenzae type b (Hib) was 8.6–8.9/100,000 people aged less than 5 years. It is estimated that about 600 people have meningitis per year and about 30% of them have poor prognosis. Children aged 4
(2) Overview of vaccine

Haemophilus influenzae is classified into 7 serotypes, and Hib causes serious disease; consequently, Hib is used for vaccine. This vaccine is used worldwide and has also been approved in Japan in December 2008. This vaccine is currently in short supply, and many children are waiting for vaccination.

The recommended schedule for vaccination is that 3 shots are given at intervals of 4–8 weeks from 2–3 months after birth, and a booster is given after about 1 year. Hib vaccine can be simultaneously given with other vaccines such as DPT if a doctor accepts the need. If you want simultaneous vaccination, please consult your doctor. If a child begins to receive vaccination at the age of 7 months or more and less than 12 months, the initial vaccination is 2 shots and a booster is 1 shot. On the other hand, vaccination can be reduced to 1 dose if a child begins to receive vaccination at the age of 1 year or more and less than 5 years. Since the resistance (immunity) against Hib rapidly increases at the age of 3 years or more, no vaccination is required for children aged 5 years or more.

Major adverse reactions associated with the vaccine are local reactions, including redness (44.2%), swelling (puffiness) (18.7%), induration (hard spot) (17.8%), and pain (5.6%), and these are similar to the adverse reactions associated with the DPT vaccine.

◊ Pediatric pneumococcal vaccine
  (heptavalent pneumococcal conjugate vaccine)

(1) Cause and course

Streptococcus pneumoniae is one of the 2 major causes of bacterial infections in children. Streptococcus pneumoniae exist in the upper respiratory tract of many children and occasionally causes bacterial meningitis, bacteremia, pneumonia, sinusitis, and otitis media. Patients with pneumococcal meningitis resulting in death or having sequelae (hydrocephalus, deafness, mental retardation, etc.) account for nearly 40% of the total patients. The major initial symptom of meningitis and bacteremia (a stage prior to meningitis) is fever and cannot be distinguished from common cold. Children aged 3 months to 5 years are likely to be infected with Streptococcus pneumoniae. The incidence of pneumococcal meningitis is about 2.9 out of 100,000 children aged less than 5 years in Japan. It is estimated that 200 children have pneumococcal meningitis every year in Japan.
(2) Overview of vaccine

Pediatric pneumococcal vaccine (heptavalent pneumococcal conjugate vaccine) was developed to prevent pneumococcal meningitis in children, including 7 serotypes causing serious conditions in children. This vaccine was first given in the United States in 2000, and is currently used as routine vaccination in nearly 100 countries. Studies in many countries confirmed that vaccination with this vaccine significantly decreased pneumococcal meningitis and bacteremia. In Japan, this vaccine was approved in October 2009, and the vaccination started in February 2010.

The initial shot is given at the age of 2–3 months and 3 shots are given at intervals of at least 4 weeks and a booster (once) is given at the age of 12–15 months, i.e., a total of 4 shots are given. This vaccine can be simultaneously given with other vaccines if a doctor accepts the need. If a child missed the opportunity of vaccination at the age less than 1 year, a child aged one year receives 2 shots and a child aged 2 years or more receives 1 shot. Children aged less than 10 years are allowed to receive vaccination. Major adverse reactions observed in foreign countries were local reactions (10–20%) and fever (15–24%). Serious adverse reactions are rare.
References (for details, see the site: http://www.yoboseshu-rc.com/publication.html)

1. Vaccination Guidelines

2. Guidelines for influenza vaccination

3. Vaccination handbook

4. Editions in foreign languages

“Vaccination and children’s health”

Revised edition in March 2010
(A5 size: 92 pages)
A guidebook on medical and regulatory information about vaccination for medical staff in practice to conduct appropriate vaccination at ease.

Revised edition in March 2008
(A5 size: 40 pages)
The “Vaccination and children’s health,” a brochure of correct knowledge and information on vaccination for parents, and the screening questionnaire are translated in the following languages and available from the following site. Please download them as required.
The entire brochure in the following languages (5 languages) is available:
- English
- Korean
- Chinese
- Portuguese
- Filipino (Tagalog)

The vaccination questionnaire alone is available in the following 9 languages:
- Spanish
- French
- German
- Italian
- Russian
- Thai
- Indonesian
- Mongolian
- Arabic
## List of Members of the Review Committee for Vaccination Guidelines

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○: Chairperson  ◎: Vice-chairman  (In order of the Japanese syllabary, titles omitted)

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Measles-rubella combined vaccination is to be given to children at the age corresponding to the first grade of junior high school and the third grade of high school, in addition to children at the age of one year and before entering elementary school. * In April 2008 and after

Measles "zero" by our cooperation