

Toward Healthy Korea with Healthy Children through Immunization

A Booklet for Immunization Information

English



MINISTRY FOR HEALTH,
WELFARE AND FAMILY AFFAIRS

KOREA CENTERS FOR
DISEASE CONTROL & PREVENTION



Toward Healthy Korea with Healthy Children through Immunization

Even though infectious diseases, such as chickenpox or measles, were dreadful fear in the past, after developing vaccine, patients with infectious diseases have been dramatically decreased. However, an outbreak that can threaten child health still remains. Thus, special concerns and active involvements of parents in child vaccination are highly required.

Korea Centers for Disease Control and Prevention (KCDC) is doing a campaign to draw an attention of a local community to child health, and to provide accurate immunization information to people in the community.

Are these infectious diseases serious? Don't you worry!



Don't you worry~ With vaccines your child doesn't have to get sick first to get that protection. A vaccine is a method to build up immunity (or antibody) which can fight against any infectious agent in your body. The government recommends several vaccinations below as core required immunizations.

There are 14 vaccine preventable diseases (VPD) are controlled under 'the Communicable Disease Prevention Act' and vaccines for the diseases are administered for all infants and children as part of National Immunization Program (NIP). Vaccines including NIP are BCG(intradermal), Hepatitis B, DTaP, Td, IPV(killed polio vaccine), MMR, JEV(killed Japanese Encephalitis Vaccine), and Varicella vaccine. For high risk groups, Influenza, Typhoid fever, and Hemorrhagic fever related renal syndrome vaccinations are recommended.

Vaccination not including NIP, such as BCG(Subcutaneous), JEV(Live Japanese Encephalitis vaccine), Hib, PCV7(Pneumococcal vaccine), Hepatitis A, vaccines are available at any private clinics. Talk to your doctor if you have questions about vaccination not including NIP.

What will happen if my child doesn't get these shots?

Already eliminated infectious disease will come back and would be widely broken out. If there were enough unprotected people in your community, the result could be an epidemic, with many people getting sick and suffering serious complications. The Immunization is the best way protecting your child from diseases. We have to vaccinate to protect our future.

How many shots dose my child need, and when?



From birth to 12 years, child should get 22 shots for 14 Vaccine-preventable diseases. Vaccines for influenza, thyroid fever, and hemorrhagic fever related renal syndrome will be given for children in high risk only.

You will have to return for more shots several more times. However, don't forget 22 times promise for your child.



WHAT YOU SHOULD KNOW for safe vaccination

Before and After of vaccination



Before shots

- * Come to the clinic with a person who knows his or her health status very well.
- * Body temperature of the child has to be measured at home.
- * Bring your child's immunization record or booklet.
- * Wear clean clothes after taking a bath. If possible, do not bring other children besides the child to be immunized.



After shots and At home

- * Stay in the clinic for 20 or 30 minute to observe your child.
- * Observer your child for the next few days.
- * You might see a small rash or notice a fever.
- * If your child has any reaction that concerns you, call your doctor or seek medical attention.
- * Closely observed for at least 3 hours after coming back home.
- * Avoid aggressive exercise on the day.
- * Recommended not to take a bath on the day.
- * Maintain clean the site of shots.
- * Sleep in up-right position.



Be there for your child during shots



Step1 Before shots

- * Bring along a favorite toy or blanket.
- * Reassure your child honestly, "It might sting but it will only a few seconds"
- * Never threaten your child with shots, "If you are not good, I will have the nurse give you a shot"
- * Encourage older siblings to reassure and comfort, not to scare your toddler.



Step2 During shots

- * Touching soothingly and talking softly.
- * Making eye contact as you smile at him/her.
- * Pointing out posters or objects around the room.
- * Telling your child a story or have him/her tell you on.
- * Allowing your child to cry, don't force him/her to be brave.



Step3 After shots

- * Holding, cuddling, caressing, and/or breastfeeding.
- * Talking lovingly and soothingly.
- * Giving praises and hugs or a surprise.



Step4 At home

- * Mark your calendar for your next appointment.
- * A cool wet cloth can reduce redness, soreness, and/or swelling where the shot was given.
- * Also try giving your child a sponge bath with lukewarm water to reduce fever.
- * Give your child plenty of fluids. It is normal if he/she eats less than usual for the next 24 hours.

What is side effects after vaccination ?

Vaccination is the most effective and highly cost-beneficial way to prevent infectious diseases. Vaccination is safely performed with the development of medical science and the improvement of vaccine production.

However, immune reactions vary by person to person, and some people could be allergic to vaccines. Thus, serious side effect could happen; but it is very rare these days (one in one million).

The benefits of vaccination outweigh its side effect. Therefore, it is very important to get vaccination at the right time.

* Please immediately contact doctors that you met when immunized, if there is any small side effect.

One another promise for your beloved child. Sleep your child in the right position !

If you are a caregiver for an infant under 12 months,
you have to know the followings.



lying supine position
(lying on back) (O)



lying prone position
(lying on tummy) (X)

Many caregivers sleep their babies in prone position (lying on tummy) to make adequate head shape and to prevent vomiting. However, prone position while sleep could cause 'Sudden Infant Death Syndrome' (SIDS). Many study results from the USA and other countries have indicated that sleeping babies in supine position could decrease the morbidity of Sudden Infant Death. Thus those countries have held large campaign for supine sleeping position for babies, which resulted in 40~70% of mortality rate decline by Sudden Infant Death Syndrome.



Sleep your baby in supine position (lying on the back to see ceiling).

It is a very good habit to keep your baby safe.

Useful web-sites that you can get every informations about vaccinations



* Web-site (<http://nip.cdc.go.kr>) This web-site offers all the information you would need about vaccination and national programs for the immunization of your baby.

These are the service that you will get in this web-site.

- * **Managing vaccination schedule** : you can check the next vaccination schedule by entering your baby's birthdate, which help you effectively manage immunization of your baby.
- * **Requesting for vaccination certificate** : you can request vaccination certificate and get it from the nearest public health center.
- * **Reporting side effects after vaccination** : if side effects are suspected after vaccination, you can report them through this web-site.
- * **FAQ / Q&A** : Many questions that parents are concerned are easily answered.
- * **Toll-free number to consult** : call 1577-1280 if you have any questions about vaccination.



Vaccines and Preventable Diseases

Q&A

Tuberculosis
Hepatitis B
Diphtheria
Tetanus
Pertussis
Poliomyelitis (Polio)
Measles
Mumps
Rubella
Varicella
Japanese Encephalitis
Influenza
Typhoid Fever
Hemorrhagic fever related renal syndrome



Tuberculosis

Q What is Tuberculosis?

A Tuberculosis is an infectious disease caused by *Mycobacterium tuberculosis*. It involves not only lung but also bones, joints, brain, and various body parts.

Q Transmission route?

A Mainly person to person. When a tuberculosis patient coughs or sneezes, it could be transmitted through air.

Q Clinical symptoms?

A Possible symptoms include systemic tiredness, weight loss, fever, and nocturnal sweating. In pulmonary tuberculosis, persistent cough, hemoptysis (bloody sputum), and chest pain would occur. In case of an infant, cough without sputum, mild breathing disturbance, and fever are the most common symptoms.

Q Treatment?

A Basic treatment is taking several anti-tuberculosis medications. However, special treatments like surgery could be accompanied with the basic medication therapy.

Q Prevention?

A Tuberculosis can be prevented by the BCG vaccination.

- Target age group : all infant and children
- Time for the vaccination : within four weeks after birth (before 12 month after birth at latest)

* Children without the vaccination have to confirm the vaccination record or the injection scar in order to determine whether it is necessary to get a shot or not.

Q What could be side effects after BCG vaccination?

A Side effects after BCG vaccination are very rare.

Mostly, misunderstanding the normal reaction as abnormal makes much of confusion. Inflammation at the injection site could happen. Likewise lymphadenopathy could naturally occur in neck and axillary regions. Those are normal progresses that can be commonly observed. The inflammation at the injection site does not require special treatment, and it will be naturally recovered.



Hepatitis B

Q What is Hepatitis B?

A Hepatitis B virus is a viral infection of the liver and is the leading cause of liver cancer or liver failure. It is a disease that causes inflammation in liver by the type B hepatitis virus infection. Many of these chronically infected people suffer from serious health problems such as cirrhosis or liver cancer.

Q Transmission route?

A HBV can be transmitted through :

- Direct contact with blood to blood (ex. transfusion)
- Infected mother to her child at birth
- Through unprotected sex with an infected person
- Procedures with contaminated sharp measures (ex. reusing needles for tattoos, piercings or injecting drugs, reusing medical needles or syringes)

* Hepatitis B is not spread through by casual contact such as sharing food water, sharing eating utensils, hand-shaking, coughing or sneezing, hugging or kissing, breast feeding etc.

Q Clinical symptoms?

A Hepatitis B is dangerous because there are often no symptoms. By the time symptoms such as abdominal pain or jaundice (dark urine and yellow discoloration of the skin or eyes) appear, it is often too late for treatment to be effective.

Q Treatment?

A Treatment for acute hepatitis B is performed mostly for relieving symptoms. Treatment for chronic hepatitis B is very limited.

Q Prevention?

A Hepatitis B infection can be prevented by hepatitis B vaccination

- Target age group : all infant and children.
- Time for the vaccination : basic shots for 0, 1, 6 months after his or her birth

Q What could be side effects after Hepatitis B vaccination?

A Side effects after Hepatitis B vaccination are very rare. The injection site swelling and itching could accompany with some local abnormal reactions such as lump, inflammation, fever and skin rash. Even though such reactions occur, they will go away within one or two days.



Diphtheria

Q What is Diphtheria?

A Diphtheria is an acute respiratory disease caused by bacteria (*Corynebacterium diphtheriae*). After immunization began, it has not occurred in Korea since 1987. However, it is still occurring in some places in the world such as Eastern Europe, etc.

Q Transmission route?

A It spreads from person to person through the physical contact or through the respiratory system.

Q Clinical symptoms?

A The most common infection site is throat and tonsils. Exudate builds up characteristic membrane that covers pharyngeal part. If it spreads to upper respiratory airway, it could cause death.

Q Treatment?

A Antibiotics and antitoxins could decrease mortality rate, but antitoxins are currently not available in Korea.

Q Prevention?

A Diphtheria can be prevented by DTaP vaccination

- Target age group : all infant and children
- Time for the vaccination : three time basic shots in 2nd, 4th, 6th month after birth
additional one shot during two period: 15~18 months old and 4~6 years old
Td shot during 11~12 years old

Q What could be side effects after DTaP vaccination?

A Side effects after DTaP vaccination are very rare. The most common problems are rash and swelling at the injection site, dizziness, loss of appetite, vomit, and fever. Secondary problems on the injection site tend to occur when 4th and 5th shots are given. Severe side effects such as high fever, convulsion, anaphylactic reaction, and spasm could occur as well.



Tetanus

Q What is Tetanus?

A Tetanus is a disease that causes stiffness in whole body, which result in immobility. It is caused by the bacterial toxin and has high mortality rate.

Q Transmission route?

A It does not spread person to person. Bacteria that causes tetanus lives in the environment element such as soil. Disease is caused when the bacteria enters the body through a break in skin.

Q Symptoms?

A Symptoms usually occur within 3 days to 3 weeks even though latent period vary from 1day to several months. In general, stiffness occurs in whole body such as lockjaw (risus sardonicus) and severe whole body muscle spasms.

Q Treatment?

A Antibiotics and antitoxins injection in the initial phase of the disease

Q Prevention?

A Tetanus can be prevented by DTaP vaccination

- Target age group : all infant and children
- Time for the vaccination : three time basic shots in 2nd, 4th, 6th month after birth
 additional one shot during two period: 15~18 months old and 4~6 years old
 Td shot during 11~12 years old

Q What could be side effects after DTaP vaccination?

A Side effects after DTaP vaccination are very rare. The most common problems are rash and swelling at the injection site, dizziness, loss of appetite, vomit, and fever. Secondary problems on the injection site tend to occur when 4th and 5th shots are present. Severe side effects such as high fever, convulsion, anaphylactic reaction, and spasm could occur as well.



Pertussis

Q What is Pertussis?

A Pertussis is an infectious disease in the respiratory system. It tends to occur in summer and fall in most cases. Because it is highly contagious, the secondary infection rate in the family is as high as 80%.

Q Transmission route?

A Mainly respiratory route by sneezing and coughing.

Q Symptoms?

A In the beginning, flu-like symptoms, for example, rhinorrhea, sneeze, febrile, mild cough, occur. Severe cough progressing, after 1-2 weeks of the infection, severe spasms of cough start and proceed for 2-6 weeks. Then, frequency and intensity of coughing decrease and recovery comes afterward. Pertussis in infants causes very severe coughing events, which result in high mortality rates.

Q Treatment?

A Antibiotics are used in the beginning. Maintaining breath is very important.

Q Prevention?

A Pertussis can be prevented by DTaP vaccination

- Target age group : all infants and children
- Time for the vaccination : three-time basic shots in 2nd, 4th, 6th month after birth
 additional one shot during two periods: 15~18 months old and 4~6 years old

Q What could be side effects after DTaP vaccination?

A Side effects after DTaP vaccination are very rare. The most common problems are rash and swelling at the injection site, dizziness, loss of appetite, vomit, and fever. Secondary problems on the injection site tend to occur when 4th and 5th shots are present. Severe side effects such as high fever, convulsion, anaphylactic reaction, and spasm could occur as well.



Poliomyelitis (Polio)

Q What is Polio?

A Polio is the most dreadful disease that causes paraplegia in a child. After the vaccination, it has not occurred in Korea since 1983.

Q Transmission route?

A It is transmitted through direct person to person transmission; especially fecal to oral transmission is common. Throat and nasal discharge could be transmission agents in regions with clean environmental hygiene.

Q Symptoms?

A Clinically 95% of infection recovers after no symptom. Only less than 1% of the infection results in flaccid paralysis.

Q Treatment?

A No specific treatment is available. Symptomatic therapy for acute neurologic symptoms caused by flaccid paralysis can be performed. After improvement from the symptoms, rehabilitation therapy has to start.

Q Prevention?

A Polio can be prevented by Polio vaccination.

- Target age group : all infant and children
- Time for the vaccination : three-time basic shots in 2nd, 4th, 6th~ 18th month after birth
an additional shot during 4~6 years

Q What could be side effects after Polio vaccination?

A Side effects after Polio vaccination are very rare. Streptomycin, neomycin included in small amount in the Polio killed vaccine could be the reason of hypersensitivity reaction. If a child is allergic to those antibiotics, rash, lump, and tenderness at the injection site as well as hypersensitivity reaction could be present.



Measles

Q What is Measles?

A Measles is an acute eruptive viral disease. It had threatened many lives of children in the past; however, after large outbreak between 2000 and 2001, measles cases have rapidly decreased.

Q Transmission route?

A Because of high contagiousness, the disease occurs in 90% of people who contact measles patients. It spreads through droplets of respiratory system or objects contaminated by the droplets.

Q Symptoms?

A Fever, rhinorrhea, conjunctivitis, rash that spreads from face to body are characteristic symptoms. Once a person get the disease and recover over it, he or she will get life-long immunity to measles virus.

Q Treatment?

A Specific treatment is not available. Only conservative and symptomatic therapies are applied.

Q Prevention?

A Measles can be prevented by the MMR vaccination

- Target age group : all infant and children
- Time for the vaccination : one shot in both periods; 12~15 month old and 4~6 years old

Q What could be side effects after MMR vaccination?

A Side effects after MMR vaccination are very rare. Pain, fever, rash, febrile convulsion, arthritis and temporary thrombocytopenia (lack of platelets) after the shot could occur. Neurologic side effects such as encephalopathy and cerebral nerve palsy might be present as well. Side effects after revaccination is similar to the reactions after the primary vaccination. However, the occurrence frequency of the side effects after the revaccination is lower than the primary because the child is already immunized.



Mumps

Q What is Mumps?

A Mumps is an acute viral disease that could involve not only parotid gland but also the whole body.

Q Transmission route?

A Mumps is transmitted through the droplet infection and contact to saliva .

Q Symptoms?

A Fever, headache, muscle ache, loss of appetite, and vomiting could occurs during the first to second day of infection. One-side or both cheek swelling follows and persists for about one week. Meningitis or inflammation of the testicles may also rarely appear.

Q Treatment?

A Specific treatment is not required. Because most of patients with measles naturally recover, symptoms oriented treatment is enough in the most cases. Analgesics (pain-killers) may be administrated if the pain is sever.

Q Prevention?

A Mumps is prevented by the MMR vaccination

- Target age group : all infant and children
- Time for the vaccination : one shot in both periods; 12~15 month old and 4~6 years old

Q What could be side effects after MMR vaccination?

A Side effects after MMR vaccination are very rare. Pain, fever, rash, febrile convulsion, arthritis and temporary thrombocytopenia (lack of platelets) after the vaccination could occur. Neurologic side effects such as encephalopathy and cerebral nerve palsy might be present as well. Side effects after revaccination is similar to the reactions after the primary vaccination. However, the frequency of the occurrence of the side effects after the revaccination is lower than the primary vaccination because the child is already immunized.



Rubella

Q What is Rubella?

A Rubella is an acute viral disease accompanied by lymphadenopathy. In case a pregnant woman gets infected by rubella, congenital defect in the fetus can be induced.

Q Transmission route?

A Rubella is transmitted through droplet infection and infection through a placenta in an infant.

Q Symptoms?

A In children, the symptom can start with simple rash and no obvious symptoms. In adults the symptom can last for 1~5 days of fever, lymphadenopathy, and upper respiratory infection before the appearance of rash. The infection in the first trimester of pregnancy could cause fetal infection, which results in 30~60% congenital defects of the births.

Q Treatment?

A Specific treatment is not required. Because most of patients with measles naturally recover, symptoms oriented treatment is enough in the most cases.

Q Prevention?

A Rubella can be prevented by the MMR vaccination

- Target age group : all infant and children
- Time for the vaccination : one shot in both periods; 12~15 month old and 4~6 years old

Q What could be side effects after MMR vaccination?

A Side effects after MMR vaccination are very rare. Pain, fever, rash, febrile convulsion, arthritis and temporary thrombocytopenia (lack of platelets) after the shot could occur. Neurologic side effects such as encephalopathy and cerebral nerve palsy might be present as well. Side effects after revaccination is similar to the reactions after the primary vaccination. However, the occurrence frequency of the side effects after the revaccination is lower than the primary vaccination because the child is already immunized.



Varicella

Q What is Varicella?

A Varicella is an acute viral disease that starts with acute febrile and systemic itch and eruptive vesicles.

Q Transmission route?

A Varicella is transmitted through the droplet infection through sneeze or cough and through the direct contact to vesicles.

Q Symptoms?

A The symptoms starts with acute, mild fever, and it proceeds to severe fever and tiredness. Afterward, skin rash begins and through the following 3~4 day of vesicle period, recovery comes with scar formation within 7~10days.

Q Treatment?

A For infants and children, symptoms oriented treatment is enough because their symptoms are usually mild. For over 13 year-old patients, chronic dermatitis patients, chronic respiratory disease patients and long-term aspirin or steroid users, antiviral therapy are recommended. Varicella vaccination within 72 hours after contact to a varicella patient may prevent the disease or decrease the symptoms.

Q Prevention?

A Varicella cany be prevented by the Varicella vaccination

- Target age group : all infants and children
- Time for the vaccination : one shot during 12~15 month old

Q What could be side effects after Varicella vaccination?

A Side effects after varicella vaccination are very rare. The most common problems are pain, swelling, rash, and fever at the injection site.



Japanese Encephalitis

Q What is Japanese Encephalitis?

A Japanese Encephalitis is a viral infectious disease caused by bites of *Culex pipiens* (small red mosquito). Once infection occurs, there is no treatment for it; thus prevention is the best therapy for Japanese Encephalitis.

Q Transmission route?

A Japanese Encephalopathy is transmitted through bites of mosquitos that have the virus

Q Symptoms?

A 95% of the Japanese Encephalitis patients do not have any symptoms. However, rest of them would develop mild fever, and some of them could advance to meningitis or encephalitis. In case encephalitis occurs, the mortality rate can be very high from 5% up to 30%.

Q Treatment?

A There is no specific treatment for Japanese Encephalitis. Symptomatic therapies for respiratory disturbance, circulation disturbance, infection would be required.

Q Prevention?

A Japanese Encephalitis can be prevented by the Japanese Encephalitis vaccine. There are killed and live Japanese Encephalitis vaccine. WHO and Korea CDC recommend the killed vaccine.

- Target age group : all infant and children
- Time for the vaccination :
 - Killed vaccine : two shots with 1 week interval in between 12~24 months after birth. Tertiary shot in 12 months after. One additional shot in both 6 years old and 12 years old
 - Live vaccine : one shot in 12~24 months after birth. Secondary shot in 12 months after the primary and tertiary shot in 6 years old

Q What could be side effects after Japanese Encephalitis vaccination?

A Side effects after Japanese Encephalitis vaccination are rare. The most common problems are pain, swelling, rash, and fever at the injection site. In very rare case, CNS side effects would occur.



Influenza

Q What is Influenza?

A Influenza, which is commonly called a 'Flu', is a disease aroused by Influenza viral infection. It is a disease that comes with acute high fever, headache, muscle ache, tiredness, pharyngitis (sore throat), cough, sputum, and rhinorrhea. Healthy influenza patients easily recover from it after showing symptoms for several days. However, patients with disease such as chronic lung diseases, heart diseases, and immune suppressed diseases could end up with death by complications such as pneumonia.

Q Transmission route?

A Influenza is mainly transmitted through person to person contact. When a influenza patient coughs or sneezes, it could be transmitted through the droplets.

Q Symptoms?

A Systemic symptoms such as fever, head ache, muscle ache, and tiredness suddenly occur with respiratory symptoms such as pharyngitis and sputum.

Q Treatment?

A Antiviral agents are effective only in initial phase of the disease. Symptomatic treatments such as bed rest, fluid therapy, antipyretic analgesic are mainly applied. Antibiotics may be used when complications, such as otitis media or pneumonia, and the secondary infection occur.

Q Prevention?

A Influenza vaccination is the most effective way of prevention and the basic principal is to receive the Influenza vaccination annually.

- Target group for annual vaccination : seniors over 65 years old, chronic heart failure patients, prisoners in public facilities, patients with chronic diseases (DM, cancer, chronic liver diseases, aspirin intaker, hemoglobinopathy etc.), health service practitioners, family of patients, pregnant women, population in the age over 50~65 years old, children in the age 6 ~ 23 months after the birth.
- Recommended time to receive vaccination : annually from October to December (Vaccination before influenza epidemic occurs is recommended; however, for the high risk group, vaccination during epidemic or after the recommended period is recommended.)

Q What could be side effects after Influenza vaccination?

A Side effects after Influenza vaccination are rare. Rash, pain, tingling sensation, and fever may occur. Allergic reaction to egg protein and Gillan-Barre Syndrome in which paralysis begins from the both lower extremities could be rarely shown up.



Typhoid Fever

Q Typhoid fever?

A Typhoid fever is an acute systemic febrile disease caused by *Salmonella Typhi* infection. Typhoid fever continuously occurs in developing countries with poor hygienic and sanitation systems. It is mainly infected to school children and young adults.

Q Transmission route?

A It spread by drinking water contaminated by urine or feces (stool) of carriers or Typhoid patients, or by eating marine products raised in dirty water or fruits spoiled by body wastes.

Q Symptoms?

A After 5-21 day-latent period, high fever, stomach ache, and tiredness can occur. Young children may complain of diarrhea, and on the other hand adults usually complain of constipation.

Q Treatment?

A It is mainly treated by antibiotics.

Q Prevention?

A Typhoid fever can be prevented by Typhoid fever vaccination

- Target groups : Typhoid fever vaccination is recommended to be given to the high risk groups
 - People in close contact with Typhoid fever carrier
 - Travellers visiting Typhoid fever epidemic region
 - Laboratory workers dealing with Typhoid fever bacteria
 - Residents in the region with unstable water supply system or residents in the region with temporary water supply
 - People working in water supply facilities
 - People working in food processing
- Time for the vaccination:
 - Oral medication (for the over 6 years old, 3~4 shots in every other day and additional shot in 3 years interval)
 - IV injection (for the below 2 years old, single shot and an additional shot with 3 years interval)

Q What could be side effects after Typhoid Fever vaccination?

A Side effects after Typhoid fever vaccination are rare. The main side effects after the vaccination is pain, rash, discomfort, itching, and lump.



Hemorrhagic fever related renal syndrome

Q What is Hemorrhagic fever related renal syndrome?

A Hemorrhagic fever related renal syndrome is an acute systemic febrile disease causing high fever, renal dysfunction, and hemorrhage. It is occurred by infection of Hantaan virus that is widely present in Asia and Europe.

Q Transmission route?

A Hemorrhagic fever related renal syndrome is transmitted through the direct contact in skin cut or respiratory contact to discharge of field mice.

Q Symptoms?

A Latent period is about 2-3weeks. The characteristic symptoms are acute fever, hemorrhage, and renal dysfunction.

Q Treatment?

A No specific treatment is available. Symptom oriented treatments are applied as clinical progressions proceed. Absolute bed rest is required in order to decrease the occurrence of the hemorrhage and shock.

Q Prevention?

A Avoiding Hemorrhagic fever related renal syndrome endemic area is the best way to prevent. Vaccination against Hemorrhagic fever related renal syndrome is another way of prevention.

- Target groups : Hemorrhagic fever related renal syndrome vaccination is recommended for the high risk groups
 - Residents of endemic regions
 - Soldiers, farmers and any workers exposed to the infection risk
 - Laboratory workers dealing with Hantaan virus or field mice
 - People with frequent outdoor activities
 - Anyone who are personally regarded to have high exposure risk
- Time for the vaccination : Basic vaccination consists of two shots with one month interval in between. An additional shot will be given 12 months after.

Q What could be side effects after Hemorrhagic fever related renal syndrome vaccination?

A Side effects after vaccination against Hemorrhagic fever related renal syndrome are rare. The most common problems are itching sensation at the injection site, pigment infiltration, rash, pain, muscle ache, edema, febrile, tiredness, and nausea



Toward Healthy Korea with Healthy Children through Immunization

		Preventable disease	Types of vaccination and methods	Number of times	Birth	1 months	2 months	4 months	6 months
National Immunization Program	Tuberculosis	BCG (Intradermal)	1	BCG (within 4weeks)					
	Hepatitis B	HepB	3	HepB	HepB				H
	Diphtheria	DTaP	5			DTaP	DTaP	DT	
	Tetanus	Td (for adult)	1						
	Pertusis								
	Polio	IPV	4			IPV	IPV	IP	
	Measles	MMR	2						
	Mumps								
	Rubella								
	Varicella	Var	1						
Japanese Encephalitis	JEV (Killed)	5							
Influenza	Flu	-							
Typhoid fever	(Oral)	Vaccination only in the high risk group	-						
	(Injectable)		-						
Hemorrhagic fever	(Injectable)	-							
Not including NIP	Tuberculosis	(Percutaneous)		BCG					
	Japanese Encephalitis	JEV (Live)	3						
	Hemophilus influenza b	Hib	4			Hib	Hib	H	
	Influenza								
	Neuroencephalopathy								
Hepatitis A	HepA	2							
Pneumococcus	PCV	4				PCV7	PCV7	PC	

ion

Vaccination Schedules

Months	12 months	15 months	18 months	24 months	36 months	4 years	6 years	11 years	12 years	
epB										
TaP		DTaP				DTaP				
								Td		
PV						IPV				
	MMR					MMR				
	Varicella									
	JEV 2 doses(1-2W after 1st dose)JEV				JEV(12M after 2nd dose)		JEV		JEV	
Vaccination only in the high risk group								Vaccination only in the high risk group		
				Vaccination only in the high risk group						
Vaccination only in the high risk group										
	JEV 2 doses(12-24M)				JEV(12M after 2nd dose)		JEV			
Hib	Hib									
	HepA 2doses (6~12M after 1st dose)									
CV7	PCV7									

Web-site <http://nip.cdc.go.kr>



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National
Immunization
Program
Guide



KOREA CENTERS FOR
DISEASE CONTROL & PREVENTION

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