




Recommended Adult Immunization Schedule, by vaccine and age group - KSID, 2012

Vaccine \ Age group	19~29 years	30~39 years	40~49 years	50~64 years	≥ 65 years
Tetanus-Pertussis-Diphtheria	1-time dose of Tdap for Td booster; then boost with Td every 10 years (Strength I)		1-time dose with Tdap; Td at 1 and 6 months; then Td booster every 10 years (strength I) (Tdap only for adults under 65 years old)		
Influenza	1 dose annually (strength III)			1 dose annually (strength I)	
Hepatitis A	2 doses (at 0 and 6 months) (strength II)	For seronegatives, 2 doses (at 0 and 6 months) (strength II)	For high-risk groups ^{a)} , check serology; 2 doses for seronegatives (at 0 and 6 months) (strength II)		
Hepatitis B	When 3-doses of immunization uncertain, vaccinate the seronegatives (strength III)		For high-risk groups ^{b)} with uncertain immunization history of 3-doses, vaccinate seronegatives (strength III)		
Measles/mumps/rubella	For high-risk groups ^{c)} , at least 1 dose; check rubella IgG for women planning a pregnancy (strength II)				
Varicella	For high-risk groups ^{d)} , check serology; 2 doses for seronegatives (strength II)				
Human Papillomavirus	Female (strength II)				
Meningococcal	For high-risk groups ^{e)} , 1 or 2 doses (strength II)				
Pneumococcal	For high-risk groups ^{f)} , 1 dose (strength I)			1 dose (strength I)	
Zoster				1 dose (strength U)	1 dose (strength III)

	For all persons in this category who meet the age requirements
	Recommended for adults if other risk factor is present
	No recommendation

- Tdap = Adult Tetanus-Pertussis-Diphtheria; Td = Adult Tetanus-Diphtheria
- For persons aged ≤15 years, follow the recommendations by the Korean Pediatric Society
- For persons aged 16-18 years, if no other recommendation, follow the recommendation of those aged 19-29 years

Strengths of recommendation





- Very strongly recommended: immunization may reduce mortality and be cost-effective. Most countries recommend the vaccination.
- Strongly recommended: immunization may reduce mortality but cost-effectiveness is unknown in Korea. Most developed countries recommend the vaccination.
- Recommended: immunization may reduce morbidity rather than mortality. Cost-effectiveness is unknown.
- Recommendation reserved: lack of evidence for recommendation.

- Hepatitis A (high-risk group):** persons with chronic liver disease; persons working at child-care facilities; medical personnel and laboratory workers with potential risk of exposure to the hepatitis A virus; food handlers working at restaurants; persons traveling to or working in countries where hepatitis A is endemic; persons who receive blood products frequently; men who have sex with men; IV drug users; and persons who have had contact with acute hepatitis A patients within 2 weeks.
- Hepatitis B (high-risk group):** men who have sex with men; sexually active persons with more than one partner; human immunodeficiency virus (HIV) patients; IV drug users; household contacts and sexual partners of persons with hepatitis B virus (HBV) carriers; patients with chronic renal failure; patients with chronic liver disease; workers who are frequently exposed to HBV; and clients and staff members of institutions for persons with developmental disabilities.
- Measles-mumps-rubella (vaccination recommended for high-risk group):** Although serological tests (especially for measles) can be done for laboratory evidence of immunity, vaccination without serological tests would be cost saving. High-risk groups: healthcare personnel (serological test required, 2 doses); persons traveling to developing countries; family members who take care of immunocompromised patients; and students who dwell in dormitories.
- Varicella:** vaccination recommended for high-risk group if serological tests reveal no evidence of immunity. High-risk groups: healthcare workers; family contacts of immunocompromised patients; teachers and child-care employees; students; military personnel; residents of correctional institutions; non-pregnant women expecting pregnancy; adolescents and adults living in households with children; and international travelers.

- Meningococcal (high-risk group):** persons with anatomical or functional asplenia; persons with complement component deficiencies; military personnel (especially for recruits); laboratory workers exposed to meningococcus; persons who travel to or live in an endemic area, particularly if their contact with local populations will be prolonged; and college students living in dormitories. The 2-dose series is recommended for adults with anatomical or functional asplenia, complement component deficiency, and HIV infection; 2 doses should be administered at 0 and 2 months. Revaccinate with meningococcal conjugate vaccine every 5 years for adults who remain at increased risk for infection.
- Pneumococcal (high-risk group):** chronic lung disease (including asthma); chronic cardiovascular disease; diabetes; chronic liver disease; chronic renal failure; nephrotic syndrome; functional or anatomical asplenia; immunocompromised patients (congenital immunodeficiency, HIV infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, other malignancy, solid organ transplantation), (vaccinate with 3 or 4 doses of protein conjugate vaccine for hematopoietic stem cell transplants); prolonged use of high-dose corticosteroids or immunosuppressive agents; and cochlear implants. One-time revaccination is recommended for persons aged 65 years or older if they were vaccinated 5 or more years previously and they were less than 65 years of age at the time of primary vaccination. One-time revaccination after 5 years is recommended for patients with chronic renal failure, nephrotic syndrome, functional or anatomical asplenia, immunocompromised conditions, and prolonged use of immunosuppressive agents.

Vaccines that might be indicated for adults, based on medical and other indications

	Chronic liver diseases	Chronic kidney disease	Chronic lung diseases	Chronic Cardio-vascular diseases	Diabetes	Solid organ Cancers receiving chemotherapy	Solid organ transplantation	Stem cell transplantation	Recipients of immunosuppressants other than transplantation	Asplenia	HIV infection		Pregnancy	Soldiers on duty
											CD4 <200/μl	CD4 ≥200/μl		
Influenza														
Pneumococcal														
Td/Tdap							Tdap	DTaP/Tdap						
Hepatitis A							a)							
Hepatitis B														
Varicella								b)						
MMR								b)						
Meningococcal														
Zoster														
Hib														

-  Vaccinations indicated based on medical and other conditions
-  Vaccinations based on general recommended schedule
-  Contraindicated
-  No recommendation

- Hepatitis A vaccination is indicated for adult patients for liver transplantation.
- Vaccinations may be considered 24 months after transplantation provided there is no evidence of graft-versus-host reaction.

Recommended Immunizations for Healthcare Personnel

Vaccinations regardless of health-care personnel positions (refer to the Recommended Adult Immunization Schedule)	
Adult tetanus-diphtheria (Td)	1 dose every 10 years
Human papillomavirus	Females in their 10s through 26 years old
Hepatitis A	For persons aged <30 years, vaccinate without serology check; For persons aged ≥ 30 years, vaccinate only seronegatives
Upon hiring, vaccinate only seronegatives, with uncertain history of immunization	
Hepatitis B	Check serology at the beginning; 3 doses for seronegatives, then check serology after 1-2 months → Revaccinate with 3 doses for seronegatives → Check serology after 1-2 months, but no revaccination even if seronegative
Varicella	For those born in 1970 or later ^{a)} , check serology upon hiring; 2 doses for seronegatives (at 0, 1-2 months)
Upon hiring, vaccinate without serology check	
Influenza	Annually
Tetanus-diphtheria-pertussis (Tdap)	1 time dose
MMR	For those born in 1967 or later ^{b)} , 2 doses prior to starting employment
Additional vaccination while prevalent in healthcare facilities or for those who work in the laboratory	
Meningococcal polysaccharide vaccine (MPSV4)	

- No study has been done regarding criteria for age in Korea, yet 40 years of age is set as a cutoff.
- When certain immunization history of 2 doses or diagnosis of measles, mumps, and rubella made by a medical doctor exists, serology check or vaccination is not needed.

Recommended Adult Immunizations for Foreign Travel

Vaccines	Regions recommended for vaccination	Characteristics of high-risk travel	Further information
Vaccinations required for entry			
Yellow Fever	· Countries that require a certificate of yellow fever vaccination among Africa and Central and South America · Refer to the National Medical Center or quarantine stations no less than 10 days before arrival		1 dose, every 10 years
Meningococcal	No less than 10 days before arrival of a pilgrimage to Saudi Arabia		1 dose; boost every 5 years in case of a conjugate vaccine

Vaccinations recommended when travelling to developing countries

Hepatitis A	All developing countries	All travelers who are not immune to the virus (particularly those ≤ 30 years)	2 doses (at 0, 6~12 months)
Typhoid Fever	India, Pakistan, Bangladeshi, Nepal, Indonesia, Philippine, Papua Negaunee	Persons who travel more than 2 weeks or travel to rural areas	1 dose; a booster every 2 years
Meningococcal	Mid-Africa regions, Saudi Arabia	Persons on missionary work or humanitarian aid	1 dose; revaccination after 5 years
Varicella	All developing countries	Some travelers aged less than 30 years who are not immune to the virus	Serology check needed; 2 doses (at 0, 1~2 months)
Measles/mumps/rubella	All developing countries	Some travelers who are not immune to the virus	Serology check is not needed; 1 dose
Rabies	South America, Mexico, Asia	Persons engaged in animal research, over the one-month period of humanitarian aid or travel to rural areas	3 doses
Yellow Fever	Yellow fever risk areas of Africa and Central and South America	Jungle explorers	1 dose; refer to the National Institute of Health or quarantine stations
Polio	India, Pakistan, Afghanistan, Uzbekistan, Tajikistan, Africa (including Nigeria)	Persons aged 40 years or less and who travel to rural areas	1 dose
Influenza	Southern hemisphere	High-risk groups who travel during summer	1 dose

Additional vaccinations when it is not general sight-seeing travel

Tick-borne Encephalitis Virus	Russia, Eastern Europe	When travelling in forests during summer	Vaccines are not available in Korea
Cholera		Persons engaged in humanitarian aid at refugee camps	Oral inactivated vaccine (Dukoral) preferred

Vaccinations or tests necessary to check immunity upon international travel

Refer to the Recommended Adult Immunization Schedule
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- * Please refer to the website of the Korean Society for Infectious Disease (KSID) for this recommendation and any changes made.