

Vaccination in the renal transplant recipient

General comments:

Vaccination (except for influenza vaccination- see table) is to be avoided in the first 6 months after transplantation, when the degree of immunosuppression and hence the immunogenic response is likely to be low. Vaccination should be offered prior to transplantation where possible.

Travel vaccination should ideally be initiated several months before travel. Avoid all live attenuated vaccines (see below)

Recommendation for vaccination in adult transplant recipients

Vaccine	Recommended before transplant	Recommended after transplant	Vaccination schedule	Comments
Tetanus/Diphtheria	Yes	Yes	1 dose every 10 to 20 years	
Pertussis	Yes	Yes	1 dose	
Influenza (inactivated)	Yes	Yes	1 dose yearly	After at least one-month post transplant, prior to the onset of the annual influenza season
Pneumococcal PCV13 (Prevenar 13)	Yes	Yes	1 dose	Follow with PPV23 vaccination at least 8 wk later (see schedule below)
Pneumococcal PPV23	Yes	Yes	1 dose	At least 8 wk after PCV13 and 5 yr after previous PPV23
Neisseria meningitides (MCV4)	Yes	Yes	2 doses, 2 months apart	Only in patients at high epidemiological risk (e.g. splenectomy, military recruits, travel); consider at those likely to receive eculizumab post transplant
Hepatitis B	Yes	Yes	3 dose series at 0,1 and 6 mo	Preferable prior to transplant. High-dose vaccine recommended in dialysis and post transplant. Accelerated schedules with 4 doses may be used. Can be used alone or in combination with HAV vaccine. The role of Hepatitis B revaccination (protective antibody titres ≤ 10 IU/ml) in transplant recipients is unclear, but has been used. The immunogenic response to booster doses in transplant recipients will be less intense than in the general population
Hepatitis A	Yes	Yes	2 doses, 6 to 12 months apart	Administer intramuscular pooled immunoglobulin in case inadequate time from vaccination to travel
Polio inactivated	Yes	Yes	1 dose	
HPV	Yes	Yes	3 dose series	Females 9-45 y; males 9-26 y and MSM (men having sex with men) >26 y
Influenza (live attenuated)	Yes	No	1 dose yearly	Temporary contraindication to transplant for 2 wk after vaccination; contraindicated after transplantation
MMR	Yes	No	1 to 2 doses	1 dose followed by serological control and a booster administration if not seroconverted
Polio (oral, live-attenuated)	Yes	No		Contraindicated after transplantation for recipients and their household contacts
Varicella	Yes	No*	2 doses , 4 wk apart	For those with VZV IgG negative and no documented proof of 2 doses of varicella vaccination previously *Has been safely administered to post transplant paediatric patients on low dose immunosuppression
Zoster	Yes	No	1 dose	For VZV IgG positive, age >50y, not immunosuppressed

Vaccines not recommended post transplant:

Measles, mumps, rubella (MMR vaccine), oral polio (Sabin) vaccine , oral typhoid vaccine (typh-vax), Yellow fever vaccine, small pox vaccine, BCG, Varicella vaccine, dengue vaccine and live attenuated influenza vaccine

References

1. SJ Chadban et al. KHA-CARI guideline: KHA-CARI adaptation of the KDIGO Clinical Practice Guideline for the Care of Kidney Transplant Recipients. Nephrology 2012. 17: 204-214.
2. Kidney Disease: Improving Global Outcomes (KDIGO) Transplant Work Group. KDIGO clinical practice guidelines for the care of kidney transplant recipients. Am J Transplant. 2009; 9 (Suppl 3):S1-155
3. Raquel S.B. Stucchi et al. Vaccination recommendations for solid-organ transplant recipients and donors. Transplantation Feb 2018. 102: S72-80.