

Fact sheet

Transplant and Travel

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Travel medicine advice for international travel after kidney transplant

Receiving a kidney transplant has a positive effect on most people's lives, particularly for those who have been receiving long-term dialysis.¹ It often gives the recipient and their family the freedom to pursue activities that would have been difficult whilst unwell or on dialysis. The option of travelling overseas whether for a holiday, business, education, or to visit friends and relatives may again be possible.

The choice of travel destination need not be limited to major cities, resorts or the more industrialised countries of the world either. With careful planning and advice from experts in both kidney transplant and travel medicine, the world could again become your 'oyster'.



High-Risk Destinations

- Africa, Asia, Central and South America, Middle East, Pacific Islands
- Developing countries
- Tropical regions
- Areas with less developed health care systems and clean water and food sources.



High-Risk Activities

Some examples include:

- Rural village home-stays, budget accommodation
- Eating or drinking from markets or roadside stalls
- Caving, dirt biking, eco-adventure tourism, excavating
- Water-based activities.



IMPORTANT

- **Discuss all travel plans with your doctor, kidney specialist or transplant surgeon.**

Pre-travel health risk assessment

An important part of pre-travel preparation is the health risk assessment, especially for people with pre-existing medical conditions travelling to high-risk destinations or engaging in high-risk activities.³ Whether you are planning an adventure safari in Africa, a visit to friends and relatives in India, or a budget holiday through South America, it is highly recommended you have a full assessment by a travel

medicine expert along with your kidney doctor or transplant surgeon six months before you go.^{2,4}

After the assessment you should receive individualised advice regarding:

- vaccinations
- food and water safety
- information on signs and symptoms of common illnesses

- signs of anti-rejection drug toxicity
- plans and prescriptions for self-treatment of common travel illnesses
- injury prevention
- travel insurance
- where to seek medical attention
- documents you may need to take for customs (for your medications).

What are the travel risks for transplant recipients?

The anti-rejection medications taken to prevent your body rejecting the transplanted kidney weaken your immune system.

You will be less able to fight off travel-related infections such as travellers diarrhoea, respiratory infections, skin and other infections.⁵ The symptoms of any illness may also be more severe as your immune system is weakened.

Some of the medications for disease prevention and treatment, such as vaccinations, malaria tablets, antibiotics and even anti-altitude tablets need to be carefully prescribed.

Travel vaccinations

The need for pre-travel vaccinations will depend on your destination, time since transplant, and the risk of catching a particular disease.⁶ The risk of damage to your transplanted kidney by each vaccine will also be considered.⁶

Live vaccines should not be given to anyone on immunosuppressive therapy due to the risk of infection and organ rejection.⁷ Inactivated vaccines are safe, but you may need booster doses in order to achieve optimum protection.⁷

The vaccines will usually work better six months after transplant when anti-rejection drug doses have been reduced.⁷



Live Vaccines - Not safe after transplant

- MMR - measles, mumps, rubella
- Varicella - chicken pox
- BCG - tuberculosis
- Yellow Fever
- Oral Typhoid
- Oral Polio - Sabin

Vaccine recommendations

Vaccine	Schedule for immune suppressed patients	Recommendations
Diphtheria/Tetanus/Pertussis ¹	Once every 10 years	Consider checking diphtheria blood titre first.
Hepatitis A	0 and 6-12 months, check titres 4 weeks later	Especially if travelling to high-risk areas. If non-immune or travelling within 2 weeks give immunoglobulin.
Hepatitis B	0, 1, 6 months + booster if HBsAb <10mIU/ml	Ideally vaccinate before transplant. Check surface antibody levels (HBsAb) annually.
Influenza	Annually	Give at least one month after transplant and prior to annual influenza season. Avoid nasal vaccine including household contacts ⁸ .
Japanese Encephalitis	0 and 28 days + booster after 1 year if continued or recurrent exposure	Recommended for prolonged or intense exposure in endemic areas during transmission season.
Measles Mumps Rubella (MMR)	Avoid	Give prior to transplant if required. Appropriate for contacts if required.
Meningococcus	Once + booster every 5 years if continued or recurrent exposure	Recommended for travel to meningitis belt. Required for Hajj and Umrah.
Pneumococcal	Once every 5 years	Recommended for all travellers.
Polio (Inactivated - IPV)	Once IPV booster, check titres	Recommended for travel to areas where polio cases are still occurring. Avoid oral polio vaccine (OPV).
Rabies	0, 7, 28 days + check titres	Recommended for travel with high risk of animal exposure. May still need human rabies immunoglobulin after exposure.
Typhoid (Inactivated Vi)	Once + booster every 2 years - use only Vi polysaccharide	Avoid live oral vaccine. Recommended for travel to areas where there is an increased risk.
Varicella/Zoster	Avoid	Appropriate for contacts if required. Give prior to transplant if required.
Yellow Fever	Avoid	Document exemption where required. Appropriate for contacts if required. Give prior to transplant if required.

Adapted from Rosen²

Medication issues

Many of your anti-rejection medications may interact with the medicines used to treat traveller's diarrhoea, respiratory and fungal skin infections, and altitude sickness. In addition, many of the tablets used for malaria prevention can lead to transplant drug toxicity.

Careful planning and prescribing needs to take place well before you travel as you may need to trial some medications first and have your blood drug levels checked. You will need to carry an adequate supply of all medications and have a plan for when you travel across time zones.

This should be discussed with your doctors before you travel.



Malaria prevention

Many anti-malaria tablets will increase the blood levels of anti-rejection medications such as cyclosporine and tacrolimus, and could lead to toxic levels that may damage your transplanted kidney.

There are a number of effective anti-malaria medications to choose from:

- ✓ Atovaquone/Proguanil (safe)
- ✗ Mefloquine, Doxycycline, Chloroquine, Primaquine (may increase anti-rejection drug levels)

Which medication is best for you will depend on a number of things:

- Your travel destination
- Patterns of drug resistance in that area
- The risk of drug interactions and side effects.

How to reduce the risk of malaria

- Use mosquito repellent with >50% DEET and reapply frequently
- Use permethrin impregnated bednets
- Wear long sleeve, long leg, loose light clothing
- Avoid being outside when mosquitos are feeding
- Stay in accommodation with screened windows and doors
- Take appropriate malaria prevention medication.

Traveller's diarrhoea

Traveller's diarrhoea is the most common disease in travellers. Its impact is more severe and more serious in people with weakened immune systems.⁹

It is important to stay well hydrated (with oral rehydration solutions) during the illness as dehydration can lead to anti-rejection drug toxicity.⁹

If the diarrhoea persists the opposite may occur where anti-rejection drugs are not absorbed and the blood levels fall putting the transplanted kidney at risk of rejecting.

It is recommended that you discuss with your doctor whether you should take some antibiotics with you so you can start treatment if you get traveller's diarrhoea.

If travelling in areas where there is resistance to these drugs (eg., South East Asia) then different antibiotics may be needed can be prescribed.⁷

If your kidney function is ordinarily reduced then the dose of antibiotic may need to be reduced.⁷ There are also medicines available without a prescription to reduce the symptoms of diarrhoea, such as loperimide (Gastrostop). These should be used with caution.

Definition of traveller's diarrhoea

- 3 loose stools in 8 hours or
 - 4 loose stools in 24 hours
- PLUS 1 of:
- nausea, vomiting, urgency
 - abdominal cramps, fever

Other illnesses

Other common traveller's illnesses are:

- respiratory infections
- urinary infections
- skin infections
- yeast infections
- altitude sickness
- sunburn

Infections can be treated early if you have the correct antibiotics,

antifungals or other medications with you.⁹ Your travel medicine doctor, kidney doctor, or your GP can provide prescriptions and instructions on when and how to use these medications.

For travellers going to high altitudes (>2500m above sea level), knowing the signs and symptoms of acute mountain sickness (headaches, nausea, vomiting, dizziness) is important.⁷ If these symptoms

continue you may need to descend. Medications such as Acetazolamide may prevent or lessen symptoms but could also cause toxicity of your antirejection medications, so should be used with caution.²

Sun protection should not be forgotten given the increased risk of skin cancer in transplant recipients, therefore, either sun avoidance or sunscreen lotions applied and protective clothing worn.¹⁰



In case of emergency

Prior to departure you and your treating doctors should identify the nearest transplant or renal service to your travel destination. A full list of medications and medical history should always be carried.

All international travellers should consider some form of travel insurance for the unexpected incident which may require urgent evacuation.

You should always have travel insurance, and discuss your transplant needs with your insurance company to make sure you are adequately covered.

Additional travel information



THINGS TO REMEMBER

- **Kidney Health Australia** - <http://www.kidney.org.au/your-kidneys/support/dialysis/dialysis-and-travel>
- **Centres for Disease Control and Prevention. Traveller's Health:**
Website - <http://wwwnc.cdc.gov/travel>

Yellow Book - <http://wwwnc.cdc.gov/travel/page/yellowbook-home>
- **International Society of Travel Medicine** - <http://wwwnc.cdc.gov/travel/page/yellowbook-home>
- **National Kidney Foundation:**
Have Transplant. Will Travel: 10 Tips for Transplant Recipients.
Website - <https://www.kidney.org/transplantation/transaction/TC/summer14/10-Tips-for-Transplant-Recipients>
- **World Health Organisation** -
International travel and health.
Website: <http://www.who.int/ith/en>

- It is important you have a health risk assessment before travelling.
- Anti-rejection medications weaken your immune system and increase your risk of picking up infections and disease.
- Anti-rejection medications may interfere with medicines commonly used for disease prevention and treatment, so medications must be carefully prescribed.
- You should always carry a full list of your medications and medical history with you.
- Identify the nearest transplant or renal services to your travel destinations in case of emergency.

What does that word mean?

Antibiotics - A medication used to treat and prevent a variety of bacterial infections and disease.

Antifungals - A medication used to treat fungal infections.

Anti-rejection medications - Medication to control your immune system that is needed for as long as your transplanted kidney functions, to reduce the risk of your body rejecting your new kidney.

Dehydration - When you do not have enough fluids in your body. If dehydration is severe it can cause serious problems and you may need to go to hospital.

Immune system - Special cells, proteins, tissues and organs that defend your body against infections.

Immunosuppressive therapy - An anti-rejection medication prescribed to transplant recipients to reduce the risk of rejection.

Malaria - An infectious disease that is spread through the bite of an infected mosquito.

Vaccination - A treatment (usually by injection) which helps your body to protect itself from an infection in the future.

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For more information about Kidney or Urinary health, please contact our free call Kidney Health Information Service (KHIS) on 1800 454 363.

Or visit our website kidney.org.au to access free health literature.

This is intended as a general introduction to this topic and is not meant to substitute for your doctor's or Health Professional's advice. All care is taken to ensure that the information is relevant to the reader and applicable to each state in Australia. It should be noted that Kidney Health Australia recognises that each person's experience is individual and that variations do occur in treatment and management due to personal circumstances, the health professional and the state one lives in. Should you require further information always consult your doctor or health professional.

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If you have a **hearing or speech impairment**, contact the National Relay Service on **1800 555 677** or **relayservice.com.au**

For all types of services ask for 1800 454 363