# Kidney (renal) conditions

**Travel health advice for travellers and health professionals**

## Key messages

- **Renal conditions may increase risk of complications from travel-related illnesses.**
- **Ideally, travellers should seek pre-travel health advice at least six to eight weeks before departure.**
- **Immunosuppressive drugs may be used to treat some renal conditions.**
- **Malaria prevention can be complex for travellers with renal issues, specialist advice may be needed.**

## Overview

The kidneys lie under the ribs at the back, above the waist. Most people have two kidneys, which filter approximately 180 litres of blood daily. Waste products and extra water are removed from the body by the kidneys as urine. Kidneys also release hormones that regulate blood pressure, help keep chemicals (such as sodium, potassium and calcium) balanced, stimulate bone marrow to make red blood cells and produce an active form of vitamin D [1].

Kidney (renal) function is a term used to describe how well the kidneys work [2].

Kidney disease is common and can affect anyone although reduction in renal function is more common in older age.

If the kidneys stop working, harmful wastes build up in the body, blood pressure may rise and excess fluid is retained, causing ankle swelling and shortness of breath [1].

Chronic kidney disease (CKD) is a term used worldwide. An individual is considered to have chronic kidney disease if they have abnormal kidney function or structure for more than 3 months [3]. Black, Asian and minority ethnic communities are five times more likely to develop CKD than other groups [1]. Treatments are available to improve renal function depending on the underlying condition and the reduction in renal function. A blood test called Glomerular Filtration Rate (GFR) is a key indicator to monitor renal function. An eGFR blood test is an estimated GFR and is calculated

by a laboratory, based on individual serum creatinine level, age, sex and race [4].

See National Institute for Health and Care Excellence CKD Classification for more details [5].

Treatment of CKD often focuses on treating the underlying causes, such as diabetes or hypertension, and monitoring. If left untreated, CKD can lead to kidney failure, which is fatal without dialysis or a transplant [1].

## Haemodialysis

In kidney failure, haemodialysis is a way of replicating kidney function, by using a machine to filter and clean the blood. This usually takes place in a hospital or specialist dialysis centre [6].

## Peritoneal dialysis

Peritoneal dialysis is also used in kidney failure to replace kidney function. Waste chemicals and extra water are removed from the body using the peritoneal membrane as a filter. This can be done at home, with support from a specialist renal team [7].

## Kidney transplants

A kidney transplant may be offered to someone with severe and irreversible kidney damage. After a transplant, lifelong immunosuppressive drugs are needed to reduce risk of rejection of the transplanted kidney to prolong survival [8].

See our Immunosuppression factsheet for in-depth travel advice.

Travellers with significant renal impairment, especially those requiring dialysis and travellers who have received kidney transplants should discuss any plans to travel abroad carefully with their renal specialist. This is particularly important for post-transplant travellers, who should get advice from their transplant team, ideally before booking their trip.

## Pre-travel preparation

Travellers with renal conditions should be encouraged to research their destination carefully before booking a trip and discuss their travel plans with a health professional. If they are under the care of a renal specialist, they should discuss their plans well in advance of departure.

Travellers should carry a summary of their medical records, with a list of medicines, extra supplies and copies of prescriptions. Issues to consider include restrictions on type and number of medicines carried and appropriate documentation when crossing international borders. See our Travelling with medicines factsheet.

Comprehensive travel insurance covering all conditions, medication, activities and destinations is essential for all travellers. A full declaration of renal conditions and treatment, including medication should be made to the insurance company and premiums may be high.

Travelling as a dialysis patient requires careful planning and often discussion with the specialist team involved with the treatment plans for accessing services abroad and advice on specialist travel insurance [9]. Some UK renal organisations also provide guidance on specialist travel insurance (see Resources section).

Access to appropriate, specialist medical care may be limited in some countries.

Individuals requiring haemodialysis can and do travel abroad. However, careful planning, in consultation with their renal specialist and the dialysis centre they are intending to use abroad is crucial. Centres abroad will require details of treatment plans and current health status so early contact and booking before flights/transport and accommodation is organised is essential [9].

Travellers undergoing peritoneal dialysis also need to plan ahead carefully before they go. This includes arranging back-up medical care by contacting a dialysis centre or hospital at their destination, in case any issues arise. They also need to make sure they have enough supplies for the whole trip, plus extra in case of delays or other problems [10].

## Journey risks

If flying, essential medical information, medicines and other medical supplies should be carried as hand luggage, in case of delays or lost hold luggage [10].

Those travellers with reduced mobility, should consider their increased risk of deep vein thrombosis or pulmonary embolism (Venous thromboembolism) during long journeys. Travellers should discuss if properly fitted compression stockings or any other preventive measures are required with their GP or specialist. See our Venous thromboembolism factsheet.

Travellers with reduced mobility who need assistance should contact their airline, coach company or rail network in advance to request assistance and support. Simple requests for booking extra legroom or an aisle seat could help make a journey more comfortable.

## Food and water-borne risks

All travellers should follow food and water hygiene and be aware of how to treat travellers' diarrhoea. This is particularly important for travellers with renal problems, who need to plan for self-management of dehydration, which can cause a deterioration of renal function [11].

Diarrhoea self-treatment medication can be considered for such travellers, but they must discuss this with their renal specialist. They should also be advised to seek early medical help for management of diarrhoeal illness.

Travellers with renal conditions who have to follow special diets such as diabetic, low fat or low salt, should check availability at their destination and make any necessary arrangements before travel [9].

## Malaria and other vector-borne risks

TravelHealthPro Country Information provides malaria advice and antimalarial recommendations for appropriate destinations worldwide. In low risk areas for malaria, antimalarials may be considered for those at risk of severe complications from malaria, such as travellers with multiple health problems.

Antimalarial recommendations should be tailored to an individual's needs, taking into account possible risks and benefits [12]. Travellers with renal conditions should be encouraged to provide detailed information about their illness, including recent blood results indicating the extent of their renal compromise and any medicines they are taking. This helps determine the most appropriate antimalarial medicine. The choice of chemoprophylaxis should ideally be made in consultation with the traveller's renal specialist or GP.

## United Kingdom Health Security Agency (UKHSA) malaria advice

Chloroquine is partially excreted via the kidneys - a dose reduction for prophylaxis is required only in severe renal impairment.

Atovaquone/proguanil is not recommended for travellers with an eGFR of less than 30mL/minute and is also contraindicated for individuals receiving renal dialysis.

Doxycycline or mefloquine may be used in severe renal failure. There is no need to reduce the dose of mefloquine in renal dialysis [12].

Potential drug interactions with any current medication must be carefully considered. Use of drug interaction checker tools such as the British National Formulary/National Institute for Health and Clinical Excellence List of Drug Interactions is recommended.

All travellers to malaria risk regions should be made aware of malaria symptoms, the importance of compliance with any advised antimalarial regime and need for urgent medical help for any symptoms, especially fever and/or flu like illness.

Other mosquito-borne diseases include dengue, chikungunya, West Nile and Zika. All travellers should protect against insect bites. This is particularly important for those with reduced renal function who may be immunosuppressed due to their illness or medication and at increased risk of severe complications from mosquito-borne infections.

## COVID-19

Individuals with chronic renal disease are considered clinically vulnerable to COVID-19 and have been included in the groups to continue to be offered COVID-19 vaccination in the UK (see Tables 2 and 3 in Chapter 14a, COVID-19, in Immunisation against Infectious Disease).

All individuals should follow current UK recommendations to reduce their risk of catching COVID-19 and passing it on to others.

Travellers with chronic renal disease should assess their individual circumstances, including medical facilities at their destination, and consider whether postponing travel would be appropriate.

General guidance regarding risk assessment for travel during the COVID-19 pandemic and information about the COVID-19 vaccination programme is available.

## Vaccination

Current TravelHealthPro Country Information travel vaccine recommendations for the planned destination should be followed, tailored to the individual's requirements and medical history.

Inactivated vaccines can be offered to individuals with renal conditions, including those taking immunosuppressive drugs. If a traveller is immunosuppressed, their immune response to inactivated vaccines may not be as good, therefore they may not be fully protected [13].

Live vaccines can, in some situations, cause severe or fatal infections in immunosuppressed individuals. This is due to extensive replication of the live weakened vaccine strain. For this reason, live vaccines are contraindicated in immunosuppressed individuals [13].

## Routine UK vaccines

All travellers should be up to date with routine UK recommended vaccines, including boosters. Individuals with renal conditions may be (depending on the severity of their illness) at increased risk of complications from some infectious disease. Specific advice should be sought from their specialist.

Further information can be found in: Immunisation of individuals with underlying medical conditions from UKHSA guidance: Immunisation against infectious disease [14].

## Hepatitis B vaccine

Hepatitis B vaccine is recommended for all those already on haemodialysis or renal transplantation programmes or with chronic renal failure. Response to hepatitis B vaccine among those with renal failure is lower than among healthy adults. Therefore, hepatitis B vaccines formulated for use in

patients with chronic renal insufficiency should be used [15].

Post vaccine blood tests to check immunity (antibody levels) are recommended yearly. If levels fall below 10mIU/ml, a booster vaccine should be given, provided there has been a previous response to the vaccine. Booster doses should also be offered to any haemodialysis patients intending to visit countries with high hepatitis B endemicity (again if they have previously responded to the vaccine). This is particularly important if they are planning to receive haemodialysis at their destination and have not received a booster in the last 12 months [15].

## Other health risks

There is an increased risk of bacterial, fungal, parasitic and viral infections in those taking immunosuppressive drugs [16]. A detailed assessment of travel risks and planned activities should be undertaken.

## Sun protection

All travellers should take care in the sun. Travellers with renal conditions, especially those taking immunosuppressive medications, need to be aware their skin may be more sun sensitive and more likely to burn.

## General advice for those who become unwell abroad

Travellers with renal conditions should seek medical attention urgently for:

- Signs and symptoms of infection, particularly fever.
- Prolonged diarrhoea and/or signs of dehydration.
- Swollen, painful/red skin and/or pus, especially around a wound.
- Animal contact such as bite, scratches or a lick to open skin.
- A tick bite in a country with risk of tick-borne disease.

When seeking medical care abroad, travellers should inform health professionals that they have a renal condition, explaining all treatment and medication, along with any other background medical information. Travellers should keep all treatment receipts and the travel insurance company should be informed as soon as possible.

A UK Global Health Insurance Card (GHIC) should be carried, as this currently allows UK citizens access to emergency care during temporary stays in the European Union (EU). Check GOV.UK website for updates and advice.

## Resources

- Global Dialysis: Travel advice

- Kidney Care UK: Travel Insurance
- National Kidney Federation: Holiday Tips and Guidelines
- National Kidney Federation: Travel Insurance
- NHS: Chronic kidney disease
- Travelling with additional needs and/or disability

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