Offering advice on immunisations to UK patients travelling abroad

JOY OGDEN

How much do you know about appropriate vaccinations for UK patients planning a foreign trip, and where do you go for advice? This article provides some helpful pointers on this complex area.

If the holiday of a lifetime or a life-changing job involves a trip to somewhere in northern or central Europe, North America or Australia, it is unlikely that UK travellers will need any vaccinations other than those routinely given to them in childhood at home. They should, however, ask whether they need a booster for their UK jabs and make sure that primary courses for any underlying medical conditions are up to date. They should also check their immunity to measles, either through previous immunisation or natural measles infection.

For more far-flung places, travellers will need protection against most of the infectious diseases they might encounter. They need to investigate the situation in the countries they plan to visit, and do it at least eight weeks before setting off, as some jabs need time to work. However, as there are no vaccines yet for some serious health risks, such as malaria, Zika virus (ZIKV), altitude sickness (travellers visiting areas of 2400m altitude or more) and schistosomiasis (a parasitic infection, also known as bilharzia, transmitted through skin contact with fresh water), travellers should also seek advice on managing the dangers associated with these illnesses and health professionals need to be properly prepared to advise and help.

Some GPs and practice nurses are well qualified to offer general advice about travel health and vaccinations and might be able to provide at least some of the jabs that are needed, but where they are not, they should give details of the nearest travel clinic. Not all vaccinations are free on the NHS, even when recommended for travelling to specified areas.

UK advice needs to improve
Dr Ron Behrens, senior lecturer and research degree director at the London School of Hygiene and Tropical Medicine, is concerned about the standard of advice on offer to UK travellers.

He says: “Our provision of travel health in the UK, in my view, is among the poorest in Europe and it’s down to the quality provided in primary care and the commercial sector. Pharma and the commercial sector are very heavily involved in selling their products.”

So how could it be improved? “By training. Nurses and GPs need to be properly trained: understanding the risks and doing proper risk assessments;
knowing how to advise and prevent; giving the right information.”

He adds: “Ninety-eight per cent of the medical problems during travel are caused by various conditions such as diarrhoeal illnesses, injuries and infections that are not vaccine-preventable. A very common problem in travellers is tick-bite infection and they need treatment for that.”

What about malaria? He explains: “We give malaria advice when it’s appropriate, so for most of sub-Saharan Africa, where malaria continues to be a threat, we strongly advise people to take malaria prevention tablets. Even if they get side-effects, they should not stop without getting good advice.”

However, he adds: “People worry about malaria or typhoid – but those are rarely a problem. There’s no use being vaccinated against typhoid if then you come off a motor bike in Thailand or get drunk and knocked over. That sort of problem is more likely.”

Dr George Kassianos is national lead on immunisation at the RCGP and president of the British Global and Travel Health Association (BGTHA). In addition, he is a GP in Bracknell and, like Dr Behrens, sees the need for more travel-health training, although he views it from a different perspective.

Pharmaceutical companies provided “a huge amount of training” for GPs and nurses until the Association of the British Pharmaceutical Industry (ABPI) laid down very strict conditions limiting their activities, he explains. That has now stopped.

Dr Kassianos says: “Of course there are places where you can go further – for example, there is a diploma in travel medicine at Glasgow University and the BGTHA has courses – but it’s just a drop in the ocean.”

He adds: “NHS England should undertake regular training courses around the UK so that GPs and nurses can actually attend and improve. But the priority for them is the childhood immunisation programme and travel vaccination has been left to the pharma companies, GP practices and private clinics, where you pay for everything.”

While the GPs’ contract is to provide information about vaccination, not to

Malaria is widespread in many tropical and subtropical countries and is a serious and sometimes fatal disease. You cannot be vaccinated against malaria, but you can protect yourself in three ways:

Avoidance of bites
Mosquitoes cause much inconvenience because of local reactions to the bites themselves and from the infections they transmit. Mosquitoes spread malaria, yellow fever, dengue and Japanese encephalitis. Mosquitoes bite at any time of day but most bites occur in the evening.

Precautions to take:
- Avoid mosquito bites, especially after sunset. If you are out at night, wear long-sleeved clothing and long trousers
- Mosquitoes may bite through thin clothing, so spray an insecticide or repellent on them. Insect repellents should also be used on exposed skin
- Spraying insecticides in the room, burning pyrethroid coils and heating insecticide impregnated tablets all help to control mosquitoes
- If sleeping in an unscreened room, or out of doors, a mosquito net impregnated with insecticide is a sensible precaution. Portable, lightweight nets are available
- Garlic, vitamin B and ultrasound devices do not prevent bites

Drugs most commonly used for malaria prevention
The main antimalarial preparations available in the UK are: atovaquone plus proguanil; doxycycline; mefloquine; and chloroquine plus proguanil. The choice depends on travel destination, medical history, current medication and age.

Travellers must always, through discussion with their doctor or pharmacist, make sure they use a drug they can tolerate and one that is appropriate for their destination(s). No drug is 100 per cent effective. In the UK, chloroquine and proguanil can be purchased from local pharmacies or chemists. All other drugs require a doctor’s prescription

Taking antimalarial tablets
- Start before travel as guided by your travel health advisor (with some tablets, eg mefloquine, you should start three weeks before)
- Take the tablets absolutely regularly, preferably with or after a meal
- It is extremely important to continue to take them for four weeks after you have returned, to cover the incubation period of the disease (atovaquone plus proguanil requires only seven days post-travel)

Prompt treatment
Following these guidelines faithfully might not guarantee complete protection. If you get a fever between one week after first exposure and up to one year after your return, you should seek medical attention and tell the doctor that you have been in a malarious area

Table 1. Advice to travellers on protecting against malaria. Source: fitfortravel website¹

Importance of vaccination
Dr Behrens, perhaps controversially, is not convinced of the benefits of vaccination. He says he did a cost-benefit analysis some years ago that showed you have to spend around £500,000 to prevent one vaccine-preventable dis-
ease, so it was “very cost inefficient”. He adds: “The diseases that vaccines prevent are very rare and very infrequent, so I don’t particularly encourage the use of vaccines other than making sure people are adequately up to date with the routine ones provided by the NHS in the UK – they are really the main ones people should have. Also hepatitis A is important because it’s a common disease and a very safe vaccine. I occasionally give certain types of vaccine, for example, to people who I believe are at significant risk of rabies.”

Dr Kassianos, on the other hand is emphatic about the value of vaccination. He argues: “It’s correct that a small number of travellers return with infectious diseases – but if we didn’t vaccinate it would be a large number. You could say the same about the small risk of catching measles – it’s because we vaccinate against it that it has fallen so dramatically. Now we are getting young people going to university and cursing their parents for not giving them the MMR [after the now discredited link with autism].”

Vaccination and immunisation also have a major role in tackling antimicrobial

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DTaP = diphtheria, tetanus, acellular pertussis vaccine; dTaP = low-dose diphtheria, tetanus, acellular pertussis vaccine; IPV = inactivated poliomyelitis vaccine; Hib = Haemophilus influenzae type b vaccine; PCV = pneumococcal conjugate vaccine; MenB/C/ACWY = meningococcal group B/C/A,C,W and Y vaccine; MMR = measles, mumps and rubella vaccine; Flu = influenza (either live nasal preparation or inactivated injectable vaccine); BCG = Bacillus Calmette-Guérin (tuberculosis) vaccine; Td = tetanus and low-dose diphtheria vaccine; HPV = human papilloma virus (cervical cancer) vaccine; *at-risk groups for tuberculosis

Table 2. UK childhood immunisation schedule. Reproduced from the fitfortravel website.
The country or countries you are visiting – some diseases are more common in certain parts of the world and less common in others
When you are travelling – some diseases are more common at certain times of the year; for example, during the rainy season
Where you are staying – in general, you will be more at risk of disease in rural areas than in urban areas, and if you are backpacking and staying in hostels or camping, you may be more at risk than if you were on a package holiday and staying in a hotel
How long you will be staying – the longer your stay, the greater your risk of being exposed to diseases
Your age and health – some people may be more vulnerable to infection than others, while some vaccinations cannot be given to people with certain medical conditions
What you will be doing during your stay – for example, whether you will be spending a lot of time outdoors, such as trekking or working in rural areas
If you are working as an aid worker – you may come into contact with more diseases if you are working in a refugee camp or helping after a natural disaster
If you are working in a medical setting – for example, a doctor or nurse may require additional vaccinations
If you are in contact with animals – in this case, you may be more at risk of getting diseases spread by animals, such as rabies

Table 3. Things travellers should consider when planning travel vaccinations (source: NHS Choices)

In the UK, our extensive vaccination programme helps to protect the whole population against preventable infections.

He adds: “Other measures include reducing healthcare-associated infections, optimising prescribing, public and professional education, and building surveillance systems globally to ensure the effective monitoring of antimicrobial resistance.”

What travel jabs are available?
Vaccinations are available to protect people travelling overseas against the following infections: diphtheria, hepatitis A and B, Japanese encephalitis, meningococcal meningitis, measles, mumps and rubella (MMR), poliomyelitis, rabies, tetanus, tick-borne encephalitis, tuberculosis (TB), typhoid and yellow fever.

How do I find what jabs are needed and where?
The National Travel Health Network and Centre (NaTHNaC) was established by the Department of Health in 2002, with the aim of improving the quality of health advice given by GP practices, travel clinics, pharmacies and other healthcare providers and thereby protecting British travellers’ health (see Box 1).

NaTHNaC director Dipti Patel says: “There are always risks involved in travel, and immunisations often play an important role in a range of measures that should be taken to prevent certain travel-related diseases. The decision to provide travel vaccines should be based on an individualised risk assessment, taking into account personal, destination- and activity-related risks. We advise that people check the country information pages on the NaTHNaC’s Travel Health Pro website (http://travelhealthpro.org.uk/) to identify both vaccine and non-vaccine-related health risks that may be present at their destination so they can take appropriate preventative measures.”

Their website also keeps a register of Yellow Fever Vaccination Centres (YFVCs) in England, Wales and Northern Ireland, while identifying and reporting on disease outbreaks and other health hazards worldwide. In addition, it has antimalarial recommendation maps on its Country Information pages for Paraguay and Myanmar (Burma).

Some countries require travellers to have an International Certificate of Vaccination or Prophylaxis (ICVP) before they enter. For example, Saudi Arabia requires UK travellers to have proof of vaccination with meningococcal quadrivalent vaccine that was issued no more than three years and no less than 10 days prior to arrival for adults and children aged over two years, who are visiting for the Hajj or Umrah pilgrimages.

Many tropical countries in Africa and South America refuse to accept travellers from an area where there is yellow fever unless they can prove they have been vaccinated against it.

Which jabs are free on the NHS?
Four travel vaccinations are provided free on the NHS where there is a risk that on return the travellers could pass the disease to the UK population:
- Diphtheria, polio and tetanus (combined booster)
- Typhoid
- Hepatitis A – including when combined with typhoid or hepatitis B
- Cholera.

If the NaTHNaC website lists the country mentioned as one where the traveller would be at risk of one of those diseases then the vaccine is free. If not, the GP is not allowed to provide it free and the traveller must pay. If the vaccine is not on this list and the patient is not in an at-risk group they must go elsewhere to get it; the GP cannot provide it and charge them.

Private travel vaccinations
The cost of travel vaccines varies, but is usually around £50 per vaccination. It is likely that travellers will have to pay for vaccinations against the following:

Hepatitis B when not combined with hepatitis A
GPs are not obliged to provide the hepatitis B vaccine on the NHS if their patients are not thought to be at risk. They may charge for the hepatitis B vaccine or refer patients who require it for travel to a travel clinic to be vaccinated privately. The current cost of the vaccine is about £40 a dose.

Japanese encephalitis
Japanese encephalitis (JE) is a type of viral brain infection transmitted by mos-
The NaTHNaC was set up by the Department of Health in 2002 with the broad aim of protecting the health of British travellers. It seeks to improve the quality of travel health advice given by GP practices, travel clinics, pharmacies and other healthcare providers, and provide up-to-date and reliable information for the traveller, travel industry and national government.

The NaTHNaC is commissioned by Public Health England and hosted by University College London Hospitals NHS Foundation Trust (UCLH); it also works in partnership with other network founders Liverpool School of Tropical Medicine (LSTM), London School of Hygiene and Tropical Medicine (LSHTM) and the Hospital for Tropical Diseases (HTD). Health professionals and travellers seeking health information ahead of travel should visit: www.travelhealthpro.org.uk

**Main goals:**
- To develop national guidance on travel health for health professionals advising the public
- To advise on specific situations and circumstances that could affect the health of British travellers
- To identify and report on disease outbreaks and other health hazards worldwide
- To share information and expertise widely
- To keep a register of, monitor and train Yellow Fever Vaccination Centres (YFVCs) in England, Wales and Northern Ireland
- To collaborate with organisations, particularly in the travel and insurance industries, and in the NHS and government, which share the aim of protecting the health of British travellers
- To train health professionals to provide best quality, evidence-based travel health advice and services
- To initiate research, collect and analyse data to achieve these goals

**Box 1. About the National Travel Health Network and Centre (NaTHNaC)**

### Tick-borne encephalitis

Tick-borne encephalitis (TBE) is a viral infection transmitted by the bite of an infected tick (which often remains attached to the skin for days), or can occasionally be caused by consuming unpasteurised dairy products. It is endemic in many regions of central and eastern Europe and Asia. Vaccination against TBE is recommended for travellers planning to work in or visit a part of the world where it is endemic. They are at greatest risk when hiking or camping in forested areas up to an altitude of about 1500m, and particularly during April to November. Travellers should be advised to check their whole body daily and remove attached ticks as soon as possible.

**Meningitis C and other meningitis**

Meningitis can be caused by a number of different infections, so several vaccinations offer some protection against it. Children should have received most of these as part of the NHS vaccination schedule (see Table 2), though this should still be checked.

As meningitis sometimes occurs as a complication of measles, mumps and rubella, the MMR vaccine, which offers protection against these infections, is usually offered.

The Men ACWY vaccines offer protection against four types of bacteria that can cause meningitis – meningococcal groups A, C, W and Y. Young teenagers, sixth formers and ‘fresher’ students going to university for the first time are advised to have this vaccination.

### Yellow fever

Yellow fever is a vaccine-preventable viral infection transmitted mainly by certain species of day-biting mosquitoes. It is a risk in tropical parts of Africa, South America, eastern Panama in Central America and Trinidad in the Caribbean, but is very rare in western travellers.

Yellow fever vaccines are only available from designated centres, for help see: http://travelhealthpro.org.uk/

### Tuberculosis

The BCG vaccination for tuberculosis (TB) is recommended for people under the age of 16 years who are travelling to live and work with local people for more than three months in an area with high rates of TB. These include: Africa (particularly sub-Saharan Africa) and west Africa, including Nigeria and South Africa; southeast Asia, including India, Pakistan, Indonesia and Bangladesh; Russia; China; South America; and the western Pacific region (to the west of the Pacific Ocean), including Vietnam and Cambodia.

### Rabies

The vaccine is usually only recommended to people travelling to an area where rabies is common and the potential risk of exposure to it is thought to be high (for instance when they are planning a jungle trek), where there is limited access to medical care. The price for the complete course of three doses for rabies currently ranges from £120 to £170. As a general rule, pregnant women are usually advised to avoid rabies vaccinations.

#### References


**Declarations of interest**

None to declare.

Joy Ogden is a freelance journalist