# TRAVEL HEALTH

## Introduction

International travel is undertaken by large, and ever increasing, numbers of people for professional, social, recreational and humanitarian purposes. World Tourist Organisation predicting an 80% increase in travel to long haul destinations. More people travel greater distances and at greater speed than ever before, and this upward trend looks set to continue. Travellers are thus exposed to a variety of health risks in unfamiliar environments. Most such risks, however, can be minimized by suitable precautions taken before, during and after travel. It is estimated that about 50% of travellers who stay in a less developed world for one month will have a health problem associated with a trip.

## Risks

Much of the morbidity will be the epidemiological risk that travellers will bring with them (e.g. coronary heart disease), injuries and accidents (including personal safety, alcohol consumption), travel by air (jetlag, cabin humidity and dehydration, respiratory diseases, DVT) environmental risks (altitude, heat, UV rays, recreational waters, animals & insects) and infections diseases.

## Infectious Diseases

### *Modes of Transmission*

The risk of being infected by an infectious disease will vary according to:

1. presence of infectious agents in the area being visited,
2. standards of accommodation, hygiene and sanitation,
3. behaviour of the traveller
4. length and purpose of the trip.

*Foodborne and waterborne diseases*
Food- and waterborne diseases are transmitted by consumption of contaminated food and drink. The risk of infection is reduced by taking hygienic precautions with all food, drink and drinking-water consumed when travelling and by avoiding direct contact with polluted recreational waters. Examples of diseases transmitted by food and water are hepatitis A, typhoid fever and cholera.

*Vector-borne diseases*
A number of particularly serious infections are transmitted by insects and other vectors such as ticks. The risk of infection can be reduced by taking precautions to avoid insect bites and contact with other vectors in places where infection is likely to be present. Examples of vector-borne diseases are malaria, yellow fever, dengue and tick-borne encephalitis.

*Zoonoses (diseases transmitted from animals)*

Zoonoses include many infections that can be transmitted to humans through animal bites or contact with contaminated body fluids or faeces from animals, or by consumption of foods of animal origin, particularly meat and milk products.
The risk of infection can be reduced by avoiding close contact with any animals—including wild, captive and domestic animals—in places where infection is likely to be present. Particular care should be taken to prevent children from approaching and handling animals. Examples of zoonoses are rabies, brucellosis, leptospirosis and certain viral haemorrhagic fevers.

*Diseases transmitted from soil*
Soil-transmitted diseases include those caused by dormant forms (spores) of infectious agents, which can cause infection by contact with broken skin (minor cuts, scratches, etc.). The risk of infection can be reduced by protecting the skin from direct contact with soil in places where soil-transmitted infections are likely to be present. Examples of bacterial diseases transmitted from soil are anthrax and tetanus. Certain intestinal parasitic infections, such as ascariasis and trichuriasis, are transmitted via soil and infection may result from consumption of soil-contaminated vegetables.

*Sexually transmitted diseases*
Sexually transmitted diseases are passed from person to person through unsafe sexual practices. The risk of infection can be reduced by avoiding casual and unprotected sexual intercourse, and by use of condoms. Examples of sexually transmitted diseases are hepatitis B, HIV/AIDS and syphilis.

*Bloodborne diseases*
Bloodborne diseases are transmitted by direct contact with infected blood or other body fluids. The risk of infection can be reduced by avoiding direct contact with blood and body fluids, by avoiding the use of potentially contaminated needles and syringes for injection or any other medical or cosmetic procedure that penetrates the skin (including acupuncture, piercing and tattooing), and by avoiding transfusion of unsafe blood (see Chapter 8). Examples of bloodborne diseases are hepatitis B and C, HIV/AIDS and malaria.

*Airborne diseases*
Airborne diseases are transmitted from person to person by aerosol and droplets from the nose and mouth. The risk of infection can be reduced by avoiding close contact with people in crowded and enclosed places. Examples of airborne diseases are influenza, meningococcal disease and tuberculosis.

**Prevention/Control**

While there are vaccines available for some infectious diseases, many do not yet have a vaccine. Prevention of travel related communicable diseases relies on general precautions being undertaken whilst on the trip. This will help stop the traveller from getting sick while in a foreign country and avoid imported infections when the traveller returns home.

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1. Pre-travel risk assessment, which allows for travel health related risk factors to be identified (Ask where travellers are going, for how long).
2. Assessment of fitness to fly and possible physical and psychological impacts of air travel to be considered.
3. Advice on basic food, water and personal hygiene.
4. Advise to avoid animals, wild and tame.
5. Safe sex is to be recommended to travellers and avoidance of blood borne virus exposure.
6. Precautions to avert insect bites should be recommended. (Vector borne diseases, especially malaria remain important health risks. About 8 in 1000 get infected with malaria).
7. Malaria prophylaxis is to be advised if people are travelling to known Malaria areas.
8. General advice on healthy travelling such as wearing sun factor and avoiding UV rays, humidity, altitude, using recreational waters, alcohol consumption etc can be given.
9. Many infectious diseases are vaccine preventable. Check World Health Organisation's website for a country list and recommendations for each country on the web for vaccination of travellers (http://www.who.int/ith/en/). Vaccines usually recommended for general travel – tetanus, poliomyelitis and hepatitis A. Some vaccinations can be mandatory and certification is required, e.g. yellow fever and meningoccocal meningitis. Vaccinations should be planned at least 6 weeks before travelling. Most vaccines will provide reasonable protection within 2 weeks even after a single dose. For those who travel regularly and at short notice, opportunities should be taken to have their vaccination status reviewed regularly.
10. Check the Department of Health's website for general medical advice for travellers. (Information keeps changing as outbreaks, environmental changes happen – other websites – HPA and NaTHNaC for fact sheets.) Health Information for Overseas Travel (Yellow Book) – some parts are not out of date. Check NaTHNaC website for updated parts.
11. Some infectious diseases like brucellosis, HIV/AIDS, leishmaniasis and tuberculosis, have prolonged and variable incubation periods. It is important to note that the clinical manifestations of these diseases may appear long after the return from travel, so that the link with the travel destination where the infection was acquired may not be readily apparent.
12. Be aware of the public health implications of growing numbers of refugees and migrants from less developed to developed countries. (Many have higher rates of TB, Hep B& C, malaria and STIs).

**Epidemiology**

The Travel and Migrant Health Section compiled baseline data prior to 2002 and since 2004, Travel and Migrant Health Section produces annual reports on foreign travel related illnesses. The last report of 2005 showed that foreign travel continued to rise in 2003, majority of the visits were to the continent of Europe. Visits to Indian sub-

continent and to sub-Saharan and Southern Africa are increasing. Holidays are the most common reason for going abroad, although there has been a rise in visits to family and friends, which overtook business trips as the second most popular reason.

Travellers' diarrhoea is the most common cause of illness in travellers and can affect up to 80% of travellers to high risk destinations, particularly in developing countries in Africa, Central and South America and Southeast Asia. It is usually short-lived and self-limiting and it may be accompanied by nausea, vomiting and fever. Diarrhoea is primarily the result of consuming contaminated food, drink and water. Gastrointestinal illness is the most commonly reported travel-associated infection in England, Wales and Northern Ireland. The most common travel-associated gastrointestinal illnesses were caused by campylobacter, salmonella and protozoan infections. Of these, the majority had visited the Indian sub-continent. In relation to other travel-associated infections, there were decreases in hepatitis A, acute hepatitis B and cholera. Malaria continues to be the most important arthropod borne infection imported into the UK. Other trends highlighted included an increase in dengue cases which were acquired in the Indian sub-continent, south east Asia and the far east and leshmanisasis, acquired in south and central Americas, with military personal at particular risk due to their deployment in endemic areas. There was also an overall increase of reported leptospirosis with is associated with the rise in adventure holidays and exposure to recreational activities in freshwater.

**Surveillance**

1. Surveillance of infectious and non-infectious hazards abroad is undertaken by the Travel Health Surveillance Section at the Health Protection Agency's Communicable Disease Surveillance Centre. Since 2002, when baseline data was set up, Travel and Migrant Health Section co-ordinates and collates data on travel associated diseases, produces regular outputs of this information and develops innovative approaches to the surveillance of travel-associated illness in England. Various sections of the Health Protection Agency CDSC contribute to the surveillance of diseases that are travel related.
2. There is enhanced surveillance for some travel associated infections (e.g. malaria, Legionnaires' disease, leptospirosis and sentinel surveillance of campylobacter).
3. Mortality data – from Foreign and Commonwealth office – doesn't differentiate between deaths of short term travellers and expatriates.
4. ONS collect data on UK residents who travelled abroad, using the annual International Passenger Survey. Data not robust enough to use as denominator data.
5. Travel history reporting is done through routine surveillance systems (statuary notifications and lab reports). This can be poor for some important illnesses (typhoid, gastrointestinal infections), making interpretation of trends difficult. Travel history reporting needs to be improved and have further epidemiological information (reason for travel, dates of travel, date of onset). It is dependent on supplementary information from clinicians and microbiologists who provide the surveillance data.

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6. Surveillance used to provide an evidence base for travel advice given to health professionals by National Travel Health Network and Centre (NaTHNaC). Funded by the Department of Health, NaTHNaC aims to promote clinical standards in travel medicine and protect the health of the British Traveller. It provides national guidance and training to health professionals who advise the public travelling abroad and collaborates with other partners such as the travel and insurance industries.

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