



Returning Travellers From Asia European Experience

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Returning Travellers from Asia –the European Experience

- Travel medicine is changing
- Returning travellers and travel medicine
- Returning travellers from Asia to Europe – information sources
- Spectrum of Illness in travellers returning to Europe
- Trends in disease prevalence | travellers returning from Asia

Can We Learn from Returning Travellers?

Lessons

- Diagnosis and management of imported illness
- Awareness of the travel – associated illness as differential diagnosis
- Emerging resistance to drugs for prophylaxis and treatment of tropical illness
- Disease risk to travellers
- Patterns of disease transmission (surveillance)
- Informs pre-travel advice

Limitations

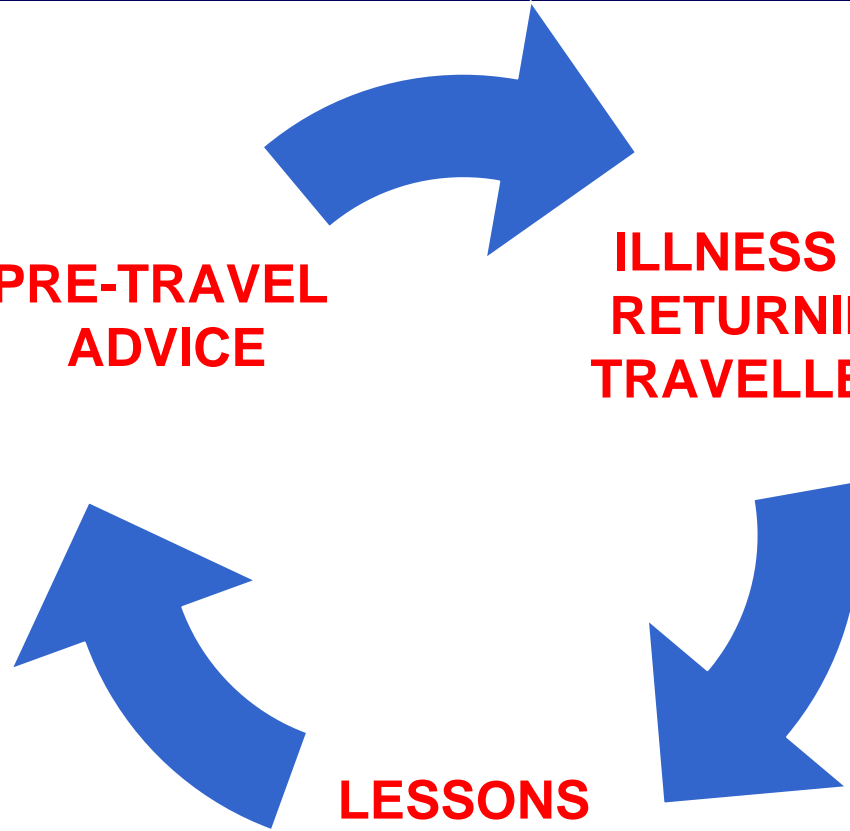
- Poor capture of minor illness, diseases with long latent periods or asymptomatic infections
- Poor recording of travel history – travel history missing or inadequate
- Lack of denominator data
- Little data on illness or deaths abroad
- Published studies reflect 'interesting' cases' and often have long time lag

Travel Medicine

**PRE-TRAVEL
ADVICE**

**ILLNESS IN
RETURNING
TRAVELLERS**

**LESSONS
LEARNED**



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Thailand

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Please refer to 'Advice sheets': for information on common health risks encountered by travellers that are not preventable by immunisation. These include [sunburn](#), [accidents](#), [travellers' diarrhoea](#), [respiratory tract infections](#), [sexually transmitted diseases and blood borne infections \(e.g. HIV infection\)](#). Advice sheets are also available for travellers such as [backpackers](#), [business travellers](#), [those going on cruises](#), [expatriates](#), [children](#), [women](#), [the elderly](#), those with [disabilities](#) and many more.

Personal safety information: this is updated regularly on the Foreign and Commonwealth Office website: [see FCO safety information](#)

Infection risks preventable by vaccination

1) Vaccinations which are recommended for life in Britain (See [British Vaccination Schedule](#))

- Ensure primary courses and all recommended boosters have been received, including [hepatitis B](#) for health care workers, [influenza](#) and [pneumococcal](#) vaccines for the elderly, [BCG](#) for those at high risk (e.g. families of immigrants from countries with high incidence and case contacts), [measles](#) especially for those going to outbreak situations.

2) Vaccinations which are usually advised (or boosters if necessary)

- [Diphtheria](#) - spread through close respiratory contact.
- [Hepatitis A](#) - a faecal/oral infection spread through contaminated food and water. It is very common in crowded conditions where hygiene is poor.
- [Poliomyelitis](#) - spread mainly through faecally contaminated food and water.
- [Tetanus](#) - contracted through dirty cuts and scratches.

3) Vaccination certificates

(This refers to formal immigration requirements as reported by WHO)


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Useful contacts

- Rabies - post-exposure treatment: Rabies Unit, Thai Red Cross Society, located on 4 Rama Road, near Lumpini Park, at the Snake Farm, Tel: 252-0161 ext 27.
- The Bumrungrad Hospital, 33 Sukhumvit Road (Soi Nana Nua) Wattana, Bangkok 10110. (2 minutes taxi drive from British Embassy). Tel: 66 (0) 2667 1000. Emergency: 66 (0) 2667 2999. Fax: 66 (0) 2667 2525. Email: info@bumrungrad.com Web-site: www.bumrungrad.com
- The Travelmin clinic in Bangkok. Tel.: 655 1024 (Bangkok) e-mail: pmorley@loxinfo.co.th
- Chiang Mai Ram Hospital; 8, Boonreungrit; T. Sripum, A. Muang; Chiang Mai. Tel: 66-53-224861

Current notes

07/08/08 Dengue Fever (update) - More than 40 000 cases of dengue fever have been recorded across the country so far in 2008. Bangkok is the worst affected area with 3763 confirmed cases of dengue haemorrhagic fever. Health Officials report that the risk of catching dengue from mosquitoes this year (2008) is running high compared to 2007, when 60 000 cases were reported.

Advice for travellers: Avoidance of mosquito bites, particularly during daylight hours, by 'covering up' and the use of bite avoidance. Elimination of breeding sites around hotel rooms/ houses is advised for longer-term stays.

11/06/08 Dengue Fever (update) - The number of cases of dengue fever diagnosed in 2008 now stands at 20,000 (until end May 2008). Of these ca.11800 were Dengue haemorrhagic fever and 300 were due to Dengue Shock Syndrome. The total number of deaths stands at 18 to end May 2008. The number of cases are substantially above those reported in the same period 2007 in which June was the peak month for the reporting of cases.

01/05/08 Dengue Fever (update) - Thailand's Public Health Ministry have reported over 10, 000 cases of dengue fever since the outbreak began in January 2008.

15/04/08 Dengue fever - The Public Health Minister has raised public awareness of the risk of dengue fever as more than 7000 suspected cases were recorded in the first 3 months of 2008. This compares with 4209 cases for the same time period of 2007.

Advice for travellers: Avoidance of mosquito bites, particularly during daylight hours, by 'covering up' and the use of bite avoidance. Elimination of breeding sites around hotel rooms/ houses is advised for longer-term stays.

[Map](#)



What Determines the Range of Illness in Returning Travellers

- Disease prevalence in local population
- Health status and age of traveller
- Traveller profile (type of traveller (VFR, business, tourist), area visited, activities, accommodation - importance of detailed travel history
- Popularity of destination country varies with country of origin – often reflects historical connections.





**Travellers
Returning
from Asia to
Europe**

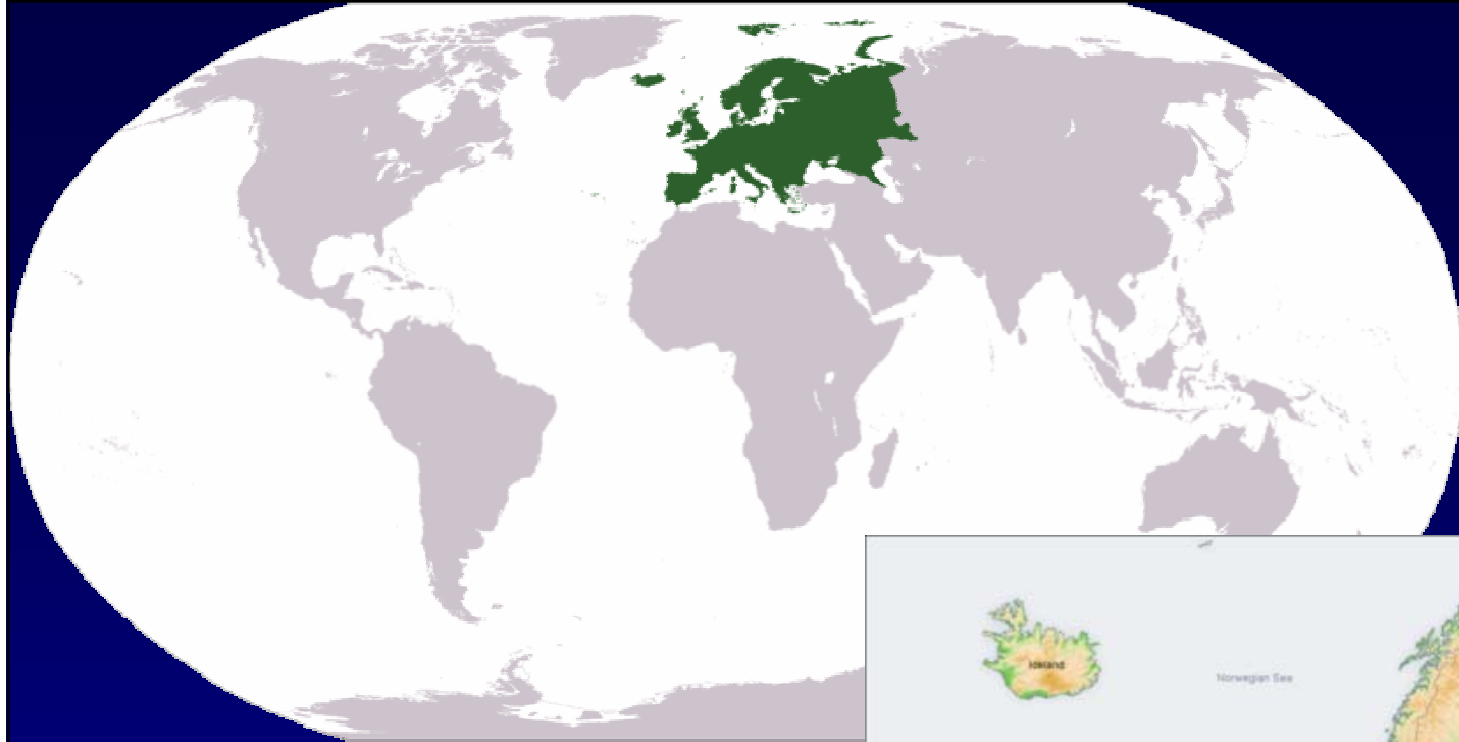
Travel to Asia from Europe

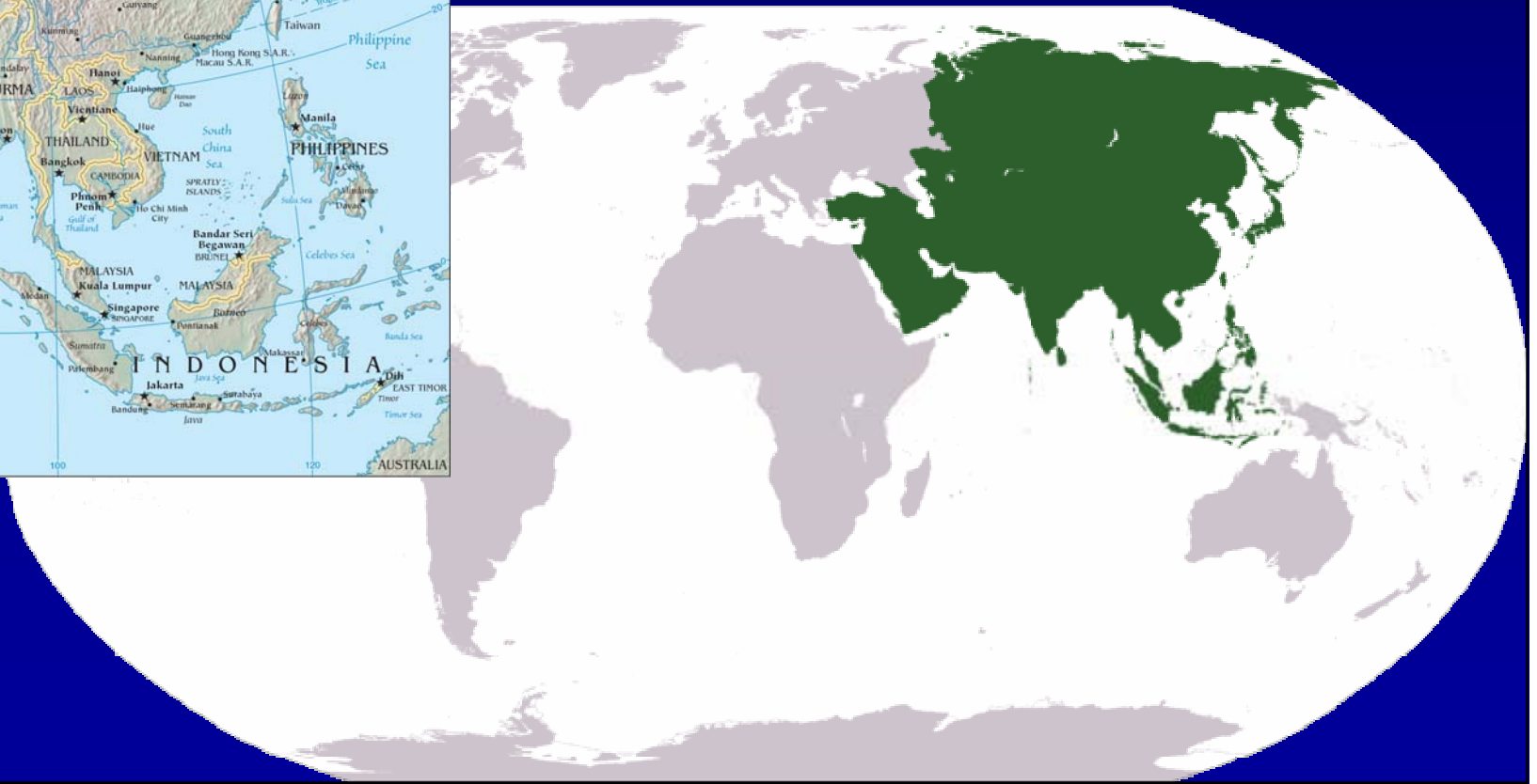
- Europe has explored, traded and waged war with Asia for thousands of years.
- Travel to Asia from Europe continues to increase – and still encompasses exploration (holiday and “gap-year” travel), trade (massive trade with India, China) and military activity.
- Travel from Europe to Asia declined after SARS - now showing recovery



Europe?

Asia?





South Asia



South East Asia



Data Sources on Returning Travellers to Europe

- National Public Health Departments
- U.K. Health Protection Agency (HPA)
- Health Protection Scotland (HPS)
- ECDC
- Eurosurveillance
- EWGLI (European Working Group for Legionella Infections)
- GeoSentinel
- TropnetEurope
- Published papers



The Spectrum of Disease in Travellers Returning to Europe from Asia

Results-

Travel from Europe to Asia

- Denominator data incomplete / difficult to access
- Traveller characteristics to Asian regions similar to those to other regions
- Popularity of different destinations within Asia varies from one European country to another:
 - U.K. – south Asia (India)
 - France – Indian Ocean (La Reunion)

Results – Spectrum of Illness

- Non-infectious illness (accidents, injuries, pre-existing chronic illness) causes significant morbidity
- Spectrum of disease for travellers returning to Europe similar to those returning to other countries
- Differences in range of diseases depended on Asian region
- Disease risk was determined more by country visited than country of origin

TABLE 1

Diagnoses ranked according to syndrome group and destination for patients with disease acquisition in China compared with Southeast Asia or India*

Rank	Patients seen during travel			Patients seen after travel		
	China (2,576 diagnoses †)	Southeast Asia (1,437 diagnoses)	India (84 diagnoses)	China (714 diagnoses)	Southeast Asia (6,913 diagnoses)	India (3,543 diagnoses)
1	Respiratory (365)	Systemic febrile illness (806)	Acute diarrhea (321)	Dermatologic (226)	Dermatologic (209)	Acute diarrhea (294)
2	Injuries (126)	Respiratory (50)	Systemic febrile illness (214)	Acute diarrhea (182)	Systemic febrile illness (205)	Systemic febrile illness (168)
3	Dermatologic (103)	Dermatologic (47)	Dermatologic (155)	Respiratory (137)	Acute diarrhea (168)	Chronic diarrhea (116)
4	Psychologic (84)	Acute diarrhea (15)	Respiratory (107)	Systemic febrile illness (92)	Nondiarrheal GI (76)	Nondiarrheal GI (104)
5	Systemic febrile illness (79)	Underlying chronic disease (14)	Injuries (36)	Nondiarrheal GI (92)	Respiratory (73)	Dermatologic (100)
6	Acute diarrhea (61)	Injuries (14)	Nondiarrheal GI (36)	Chronic diarrhea (69)	Chronic diarrhea (66)	Respiratory (51)
7	Dental (35)	Nondiarrheal GI (12)	Cardiovascular (24)	Underlying chronic disease (55)	Nonspecific symptoms or signs (38)	Nonspecific symptoms or signs (50)
8	Genitourinary (27)	Genitourinary (6)	Neurologic (24)	Nonspecific symptoms or signs (35)	Underlying chronic disease (22)	Underlying chronic disease (15)
9	Nondiarrheal GI (27)	Nonspecific symptoms or signs (6)	Nonspecific symptoms or signs (24)	Injuries (15)	Genitourinary (22)	Genitourinary (13)
10	Ophthalmologic (22)	Neurologic (5)	Genitourinary (12)	Psychologic (14)	Dental (17)	Neurologic (10)

*The primary variable analyzed was proportionate morbidity (PM): number of patients with a specific diagnosis or group of diagnoses as a proportion of all ill travelers returning from a destination.⁵ Numbers of cases per 1,000 ill patients seen are given for each syndrome group. Only the top 10 syndrome groups are listed.

†Number of diagnoses in this row may exceed the corresponding number of patients because each patient may have more than one diagnosis.

Davis Xiaohong M. et al for the GeoSentinel Surveillance Network, 2008.

Short report: Health Risks in Travelers to China: The GeoSentinel Experience and Implications for the 2008 Beijing Olympics.

Am. J. Trop. Med. Hyg. 79(1) 4-8.

Results - Who Gets Ill?

- Young (25 – 40)
- Male
- Long stay
- VFR
- Poor accommodation



Range of Illness in Travellers Returning from Asia to Europe

Top Ten (in alphabetical order)

- Dermatological
- Diarrhoea –acute
- Diarrhoea – chronic
- Dental
- Febrile illness
- Genito-urinary
- Non-diarrhoeal gastrointestinal
- Non-specific
- Psychiatric
- Respiratory
- Underlying chronic illness

Table 2. Diagnosis According to Syndrome Group and Travel Region among Ill Travelers Returning from the Developing World.*

Diagnosis	All Regions (N=17,353)	Caribbean (N=1115)	Central America (N=1326)	South America (N=1675)	Sub-Saharan Africa (N=4524)	South Central Asia (N=2403)	Southeast Asia (N=2793)	Other or Multiple Regions (N=3517)†
Systemic febrile illness‡	226	166	153	143	371	171	248	145
Acute diarrhea‡	222	196	234	219	167	327	210	238
Dermatologic disorder‡	170	261	225	264	127	130	212	125
Chronic diarrhea‡	113	132	173	130	57	129	97	149
Nondiarrheal gastrointestinal disorder‡	82	87	75	82	70	74	58	121
Respiratory disorder‡	77	45	49	50	77	89	97	86
Nonspecific symptoms or signs‡	70	53	51	59	75	85	63	77
Genitourinary disorder‡	35	29	11	27	51	25	29	40
Asymptomatic parasitic infection‡	30	15	26	33	29	44	30	24
Underlying chronic disease‡	19	14	23	18	20	14	13	27
Injury‡	14	23	11	14	7	15	14	21
Neurologic disorder‡	15	23	24	16	10	15	10	16
Adverse drug or vaccine reaction‡	12	4	5	5	26	12	8	8
Psychological disorder‡	12	8	20	15	8	12	10	18
Tissue parasite‡	10	5	5	11	22	4	3	7
Cardiovascular disorder	8	12	7	5	8	7	5	10
Obstetrical or gynecologic disorder	3	3	2	2	4	3	3	3
Ophthalmologic disorder	2	2	2	2	2	1	1	2
Dental problem	1	1	1	1	1	0	2	1
Death	1	1	0	0	1	3	0	1
Loss to follow-up‡	8	9	12	9	8	5	4	13

* Diagnoses included in each syndrome category are listed in the Supplementary Appendix. Numbers may not total 1000 because patients may have had more than one diagnosis.

† This category includes travel to West Asia, Northeast Asia, eastern Europe, Oceania, North Africa, or Antarctica (1868 travelers) or to multiple developing regions, for which ascertainment of exposure was impossible (1649 travelers).

‡ P<0.01 for the comparison among regions.

Good News!

In a survey of 794 travellers presenting to the Berlin Institute of Tropical Medicine (2003-2004), travel to Thailand was significantly associated with a decreased risk of illness.

Rack et al, J. Travel Med (Sept-Oct 12(5) 248-532005)



Trends in Illness in Travellers Returning to Europe from Asia

Going up...

- Dengue fever
- Chikungunya

Going down...

- Typhoid
- Some diarrhoeal illness

Getting Interesting...

Malaria

- Plasmodium knowlesi (Malaysia, Philippines)
- Multi-drug resistance

Hepatitis E

- Autochthonous transmission in European countries

Conclusions

- Variations in disease spectrum occur depending on country / region visited within Asia
- Variations to a lesser extent depend on country of origin – no clear pattern – reflects travel patterns of country of origin
- Certain groups of travellers are over-represented among travellers returning home ill – many do not receive pre-travel advice
- Some diseases are becoming more common in travellers returning to Europe and may emerge as a significant health risk to travellers and to those in the country of origin
- Resistance to prophylactic and treatment drugs is increasing
- The study of returning travellers informs pre-travel advice

