



# Yellow Fever

## the need to vaccinate



### Background

Yellow Fever is a viral disease transmitted by mosquitoes. Approximately 200,000 cases occur each year with the majority of these occurring in Africa.

### Geographical Distribution

About 90% of all Yellow Fever cases are found in Africa. The disease occurs mainly in the western part of the sub-Sahara but occasionally in some of the eastern countries. In Africa reports are regularly received from Nigeria, Ghana, Sierra Leone, Senegal, Mali etc. In South America reports are received from Brazil, Bolivia, Columbia, Ecuador, Venezuela and Peru.

### Endemic Vs Epidemic

Transmission of Yellow Fever can or could occur in many of the hotter tropical and sub-tropical countries throughout the world. If a country is defined as 'endemic' it means that the right conditions occur for the disease to be transmitted and that cases have occurred in the past. The WHO map shows the endemic countries where Yellow Fever could or does occur. Asia does not have any transmission of this disease even though throughout the region there is the right climate, the correct mosquitoes and a very suitable environment for the disease to flourish. It is for this reason that the countries in Asia are very concerned about the introduction of the disease through infected international travellers.



### The risk for the international traveller

Because the vaccine is extremely effective it is difficult to accurately estimate the current risk for the international traveller who will visit an infected country. WHO estimates that in Africa an unvaccinated person visiting a risk region has a risk of between 1:300 to 1:1300 of becoming infected. In South America this risk may be between 1:3000 to 1:13,000. Most transmission occurs in the forested regions of an infected country but urban infections are now becoming more common. Each year unvaccinated European travellers develop the disease - even on standard tourist holidays such as the Belgium lady who visited Gambia and died from the disease soon after her return home (2001). The Amazon Basin is another common site for tourists to contract the disease.

### Essential Vs Recommended Vaccination

For entry into some countries the possession of a valid international certificate, showing cover against Yellow Fever, is essential. Otherwise the traveller runs the risk of being detained at immigration and potentially of being vaccinated before being allowed to continue their journey. In many regions (such as the countries of East Africa) the risk of disease is almost zero but unfortunately the immigration officials who are processing your paperwork may decide otherwise and it is for this reason that the travel clinic doctor may suggest cover against the disease.

### Coastal Brazil

The Yellow Fever map shows how the disease is creeping towards the major urban centres along the east coast of Brazil. The cities of Rio and Sao Paulo have suffered greatly over the past few years from Dengue Fever - which is a different viral disease but also transmitted by the same mosquito involved in spreading Yellow Fever. It is for this reason that many doctors will advise vaccination cover even though the individual risk is small.

### Kenya & Tanzania

The risk in either of these countries is also very small. Kenya did have deaths associated with Yellow Fever in the early 90's but these were the first cases for many decades. However, crossing borders in central Africa tends to be fraught with difficulty as immigration guards may demand proof of Yellow Fever vaccination. However for those travelling purely to Kenya from Europe (and other recognised non-endemic countries) the vaccine may not be necessary.



### Zambia

In 2003 the World Health Organisation removed Zambia from its list of endemic countries for Yellow Fever. This placed Zambia in a similar situation to Zimbabwe, Mozambique, Namibia, Malawi, Botswana and South Africa in that travellers between these countries do not require to have proof of Yellow Fever vaccine cover. However, unfortunately not all the customs and immigration officials are au fait with this change and regularly travellers who have visited Zambia (passport stamped) are reporting

problems on attempted entry to another non-endemic country in southern Africa. Under these circumstances, travel clinics are still recommending Yellow Fever vaccine if the traveller intends visiting these other countries.

### Contraindications and Complications

Generally the vaccine is well tolerated and the risk of any complication is very small. Standard contraindications include pregnancy, breastfeeding, taking steroids and HIV/AIDS immune suppression. There is also a slightly higher risk in older travellers and so this does need to be borne in mind with this particular age group. An individual describing a true allergy to egg-based products or a sensitivity to Gelatin should not receive the vaccine. Those who have had their Thymus removed also appear to be at higher risk of reaction.

### What to do

As with many areas of travel medicine it is essential that the travellers attends for a detailed medical discussion before their trip abroad. At that time the situation regarding the advisability for Yellow Fever vaccine can be discussed in detail and an informed decision can then be made based on the individual's medical history and their travel plans. Further information is available via <http://www.cdc.gov/travel/diseases/yellowfever.htm>

National Travel Vaccine Appointment Tel 1-850-48 76 74

Web Address: [www.tmb.ie](http://www.tmb.ie)

This leaflet has been prepared using information supplied from W.H.O. Center for Disease Control (US) and other International sources.

- ✓ Travel Accessories
  - ✓ Tropical Diagnostic Laboratory
  - ✓ Tropical Disease Screening Centre
  - ✓ W.H.O. registered Yellow Fever Vaccination Centre
  - ✓ International Vaccination and Malaria Advice Centres
- YellowFever/TMB/Update20Dec2004

- TMB - Blanchardstown
- TMB - Dun Laoghaire
- TMB - Grafton Street
- TMB - Galway
- TMB - Inchicore
- TMB - Kerry
- TMB - Limerick
- TMB - Shannon
- TMB - Stillorgan
- TMB - Walkinstown
- TMB - Waterford