



Travel Medicine

Objectives:

- Define travel medicine and its importance
- Levels of travel medicine (pre, during, post)
- Pre-travel consultation (risk assessment, risk management, immunization, prophylaxis, self-medications)
- Immunization (required, recommended, routine)
- Other infections (malaria, zika, traveler's diarrhea)
- Prevention (food, water and personal precautions, environmental precautions, vector and animal precautions, injury precautions)
- Travel emergency kit
- Post-travel care

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Important | Extra | Notes

[Editing file](#)

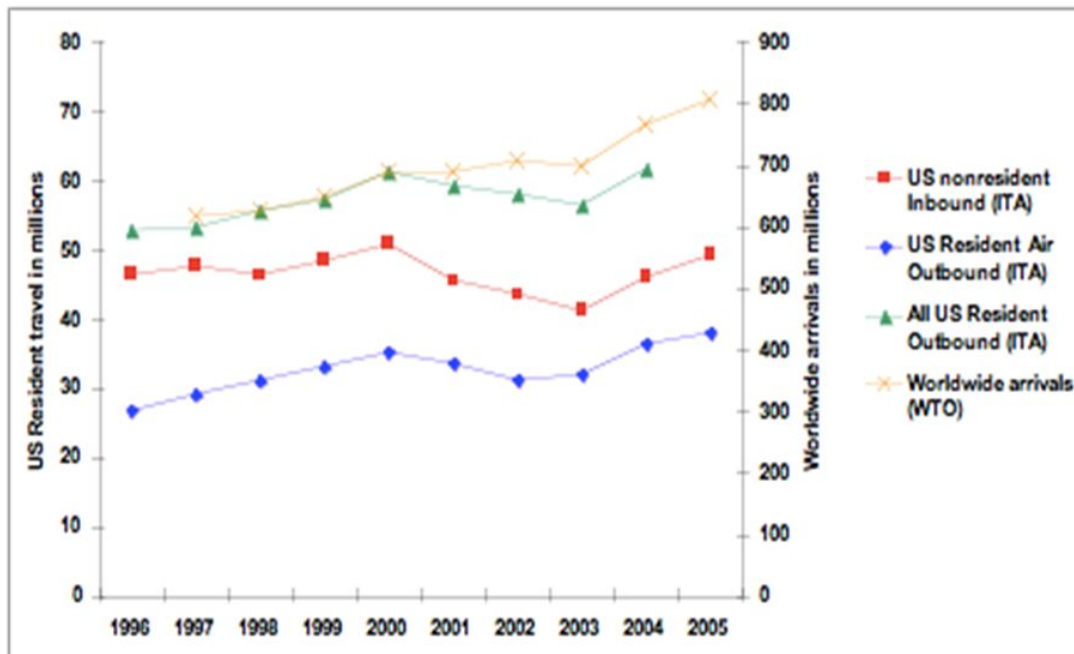
What does travel medicine do ?

- Seeks to **prevent illnesses and injuries occurring to travelers** going abroad
Ex. Saudis going abroad, we give advices and precautions
- Manages problems arising in travelers **coming back** or coming from abroad
- Impact of **tourism** on health and to improve health and safety services to tourists
- **Refugee and migrant** health

Why travel medicine ?

WORLDWIDE :

- 1950 - 25 million international tourist arrivals
- 2000 - 664 million international tourist arrivals
- 2010 - 940 million international tourist arrivals (growth rate 7% from 2009)
- 2030 – forecast 1.8 billion



Importance of travel medicine:

Of 100,000 travellers to the developing world for 1 month:

- 50.000 will develop some sort of health problem during their trip 50%
- 8000 will see a physician
- 5000 will have to stay in bed
- 300 will have to be admitted to hospital either during their trip or on return
- 50 will need to be air evacuated إخلاء طبي
- 1 will die

Concerns :

- International travel carries a risk for **travelers, community of origin and community of destination**
- The risk for travelers includes diseases, injuries and death

Types of travelers:

- Tourists
- VFRs (visiting friends and relations)
- Business travellers
- Migrant workers
- Military
- Aid and Development workers
- Pilgrims
- Refugees
- Asylum seekers
- Gap Year travel
- Students
- Expatriates

Hiking and diving have more risk

Special populations:

- Elderly travellers
- Infants and children
- Pregnant women
- Travellers with chronic diseases
- Travellers with disability
- Immunocompromised traveller

Special itineraries: We must ask before she/he travels to know how to prevent.

- Cruise ship travel
- Diving
- Extended stay
- Extreme travel
- Mass gatherings (eg. The Hajj)
- Wilderness/remote regions

Risk depends on destination

Components of travel medicine:

- Pre-travel
- During travel
- Post-travel

Pre-travel consultation:(4-6 weeks before departure)

- Risk assessment (potential hazards) Questions about the trip
- Risk management (advice to reduce exposure to health risks)

If a potential danger is suspected

- Service delivery: immunization, prophylaxis or self-medications
- Empower traveler to manage his health

Ex. Diabetic patients and chronic diseases patient to get prescriptions for the whole travel period.

Risk assessment:

Information about travelers	Information about trip
Age and sex	Destination
Medical history	Length of stay
Medications	Mode of transport Airplane: low pressure Boat: motion sickness
Allergies	Purpose of trip and planned activities
Immunization history	Financial budget, accommodation, insurance Very important: There's a difference between someone who's staying at a 5 stars or 2 stars hotel
Special health needs Disabilities	Healthcare in destination

Risk factors and health problems facing international travelers:

RISK :

- Overcrowding If he's living a small town and not used to look around for cars passing.
- Low sanitation
- Climatic change
- Vector of diseases
- Unsafe roads
- Security problems Break-ins

HEALTH PROBLEMS :

- Aggravation of existing problem
- Food and water borne infections Travellers diarrhea
- Air borne infections
- Unintentional & Intentional Injuries
- Vector borne diseases
- Zoonotic diseases

Common diseases associated with international travel

Gastrointestinal <ul style="list-style-type: none">• Traveler's diarrhea• Typhoid fever• Hepatitis A• Cholera• Poliomyelitis	Respiratory diseases <ul style="list-style-type: none">• Influenza• Meningitis• Mers-Cov• Tuberculosis	Vector borne diseases <ul style="list-style-type: none">• Yellow fever• Malaria• Dengue fever• Leishmaniosis• Japanese encephalitis	
Behavior related <ul style="list-style-type: none">• Sexually transmitted diseases	Zoonotic diseases <ul style="list-style-type: none">• Rabies	Blood borne <ul style="list-style-type: none">• Hepatitis B	Soil borne <ul style="list-style-type: none">• Tetanus

Unintentional and intentional injuries:

- Road traffic injuries
- Interpersonal violence
- Injury in recreational water
- Animal bites (domestic and wild animals)
- Falls (unintentional)

Risk management (give advise):

- Food and water safety and hand hygiene
- Insect bite prevention Tropical regions
- Immunization
- Malaria prevention In malaria endemic regions
- Personal safety (RTA, fall, drowning, fire, robbery, STD)
- Environmental risks (sun exposure, heat, high altitude, motion sickness, DVT)
- Travelers with special needs (chronic disease, children, pregnant)
"Take your medications, monitors, snack"
- Traveler's medical insurance If he has risk, patient should get one even if the country does not require insurance.

Preventive measures for common diseases among international travelers:

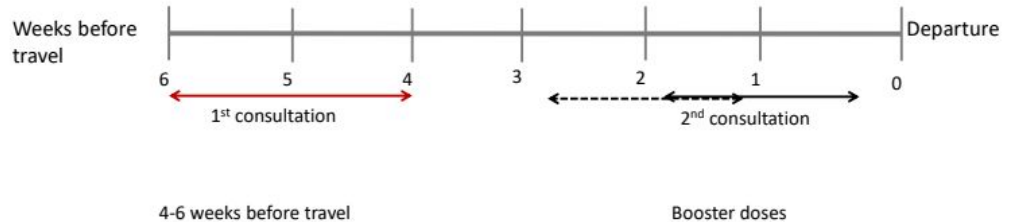
Immunization and (or) Chemoprophylaxis

Immunization:

- Routine:
 - Childhood immunizations
- Recommended:
 - According to risk of infection
- Required:
 - Yellow fever vaccine
 - Meningococcal vaccine

Immunization for travelers

if we take a 6 weeks vaccine 1 week prior, it might not be activated it yet and patient will acquire infection.



Routine immunizations:

In KSA	Others in other countries
Hepatitis A&B	Human papillomavirus
BCG	Tick borne encephalitis
DPT	Influenza
MMR	
Polio	
Pneumococcal	
Meningococcal	
Rota virus	
Varicella	
Haemophilus influenzae	

Required immunizations:

- Yellow fever (international health regulation)
- Meningococcal meningitis: by Saudi Arabia for Hajj and Umrah and seasonal workers.
- Polio **Also in hajj and umrah**

Yellow fever vaccine:

Required for travelers to a country under the **International health regulations**.

Recommended: for travelers to endemic area.**(Brazil)***

- Live attenuated virus vaccine
- Single subcutaneous injection
- Immunity starts after 10 days
- Valid for 10 years

Not recommended for:

- Infants < 9 months
- Immunocompromised patients
- Pregnant women
- Egg allergies
- HIV-positive individuals

Yellow fever vaccine recommendations



Meningococcal meningitis:

Required: by Saudi government for Hajj or Umrah.

Recommended: for travelers to endemic area.

For Hajj

- Quadrivalent polysaccharide (MPSV4; A, C, Y, W-135) or conjugated with diphtheria
- Single dose (injection)

Meningitis belt

Risk:

- Sub-Saharan Africa (seasonal)
- Saudi Arabia (Hajj)
- Crowded student dormitory situations

Protection:

- Protection is for 3–5 years in adults and older children
- Not effective for children below 2 years

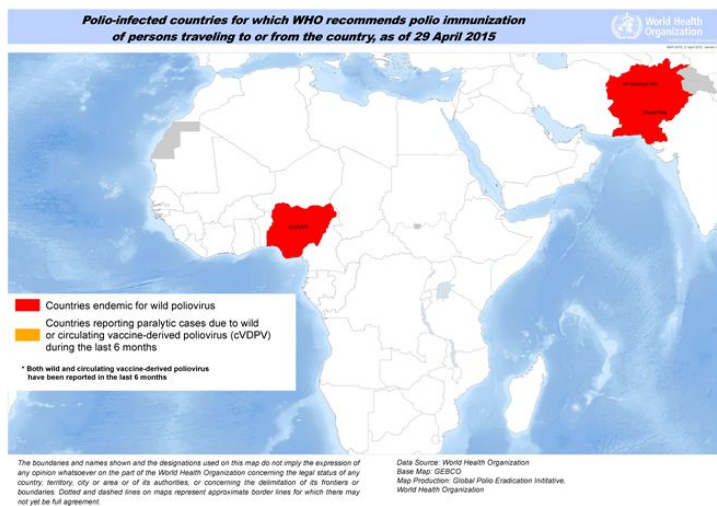


Polio:

- Transmission: contaminated food and water.
- Rare in travelers
- Prevention:
 1. Food, water, personal hygiene
 2. Vaccination (injectable, oral)

Polio in Saudi Arabia:

- In Saudi Arabia, proof of receipt of polio vaccine is **required** from travelers from endemic countries or countries vulnerable to infection or re-infection.
- within the previous 12 months and at least 4 weeks prior to departure
- All travelers from these countries will also receive 1 dose of OPV at border points on arrival in Saudi Arabia



Recommended immunizations (according to risk): Depends upon destination

- Hepatitis A, B
- Typhoid
- Cholera
- Poliomyelitis
- Japanese encephalitis
- Rabies
- Tick-borne encephalitis

Hepatitis A:

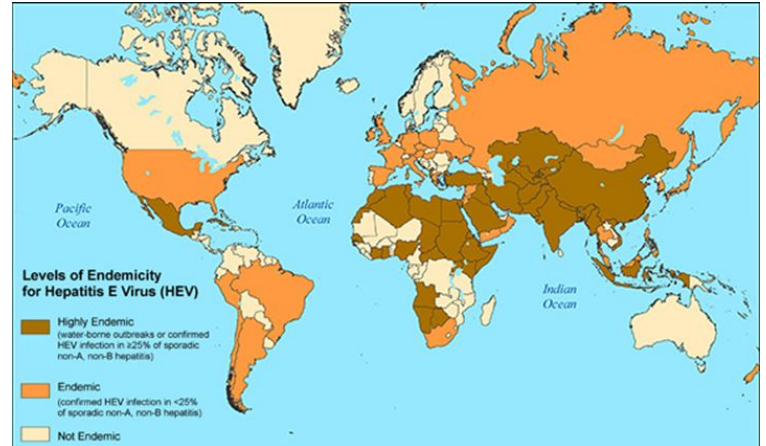
- Endemic in many developing countries
- High mortality in elderly and pregnant women.
- **Prevention by food, water, personal hygiene and immunization**
- Two doses of inactivated vaccines (HAVRIX® or VAQTA®)
- First dose: 70 – 85% develop antibodies within two weeks **Partially protection**
- Second dose: after 12 to 18 months leading 100% seroconversion
- **If traveling in <4 weeks after 1st dose: immune globulin should be administered** at a different anatomic injection site

Protection:

- 14 – 20 years in children
- 25 years among adults

Recommended:

- Travelers to the developing countries
- 2 years and older



Hepatitis B:

- Transmission: Blood-borne, sexual contact
- Prevention: Avoid risk factors, immunization

- Routine screening for blood donors
- Protected sexual contact

Hepatitis B vaccine:

- Recombinant vaccine given by intramuscular injection
- Monovalent or combined with hepatitis A (for those ≥ 18 years)
- Regular schedule: 0-, 1-, and 6-month with no booster dose

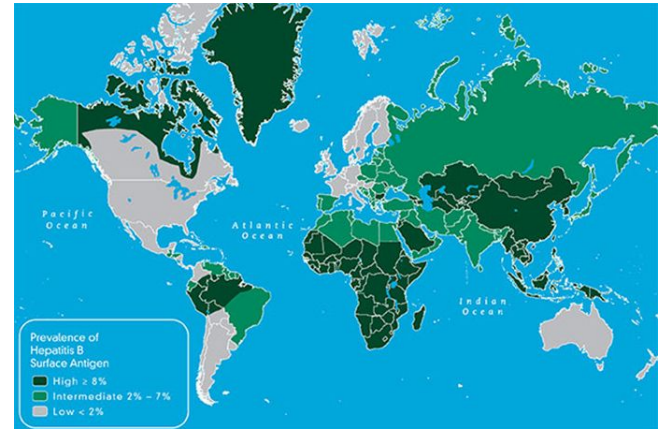
Accelerated schedule for the combined vaccine only (FDA) No booster required

- 0-, 7-, and 21- days
- Booster dose at 1 year

Recommended for travelers to endemic areas and

travelers with special risk

Ex. a surgeon going for a volunteer mission



Typhoid:

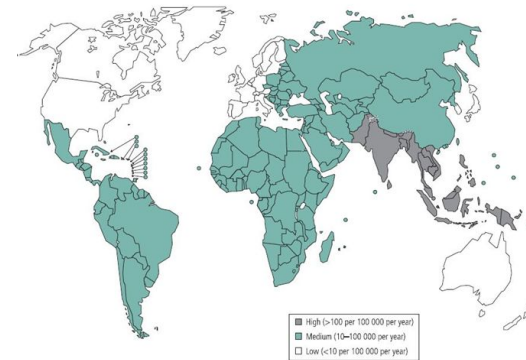
- Transmission: by contaminated food and water
- Prevention: food, water, personal hygiene and vaccination

Live attenuated (Ty21a):

- Oral vaccine
- **Four doses** (One capsule on **alternating days** not with antibiotics)
- Schedule should be **completed at least one week before traveling**
- Booster every 5 – 7 years

Vi capsular polysaccharide vaccine (ViCPS): If the patient isn't coming back

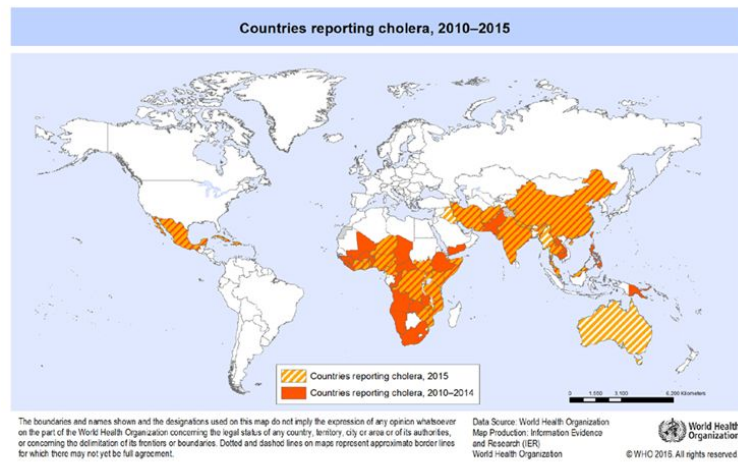
- Single dose intramuscular injection
- At least two weeks before traveling
- Booster at 2 years intervals



1. Both vaccines are effective but differ in duration of immunity
2. Compliance may be a problem with oral vaccine
3. Recommended to travelers to developing countries

Cholera:

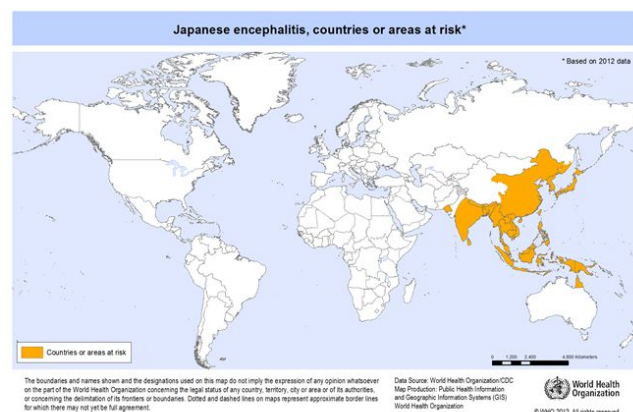
- Transmission by contaminated **food or water**.
- Rare in travelers
- Prevention: food, water, Personal hygiene and Vaccination (oral)
- Live attenuated oral vaccine
- Result in 60–80% protection for 6 to 12 months
- Not effective against the new serotype O139 (spread rapidly through Asia in mid 90s)



Japanese encephalitis:

- Transmission: by mosquito bite
- Risk increases in travelers to rural Asia or long stay travelers.
- Prevention: vector control and vaccination
- Two available vaccines
- Given as three doses: 0, 7 and 30 days
- Accelerated schedule of two doses at 0 and 7 days (80% conversion)
- The last dose should be at least 10 days before departure
- Booster dose at 24 months if the risk continues

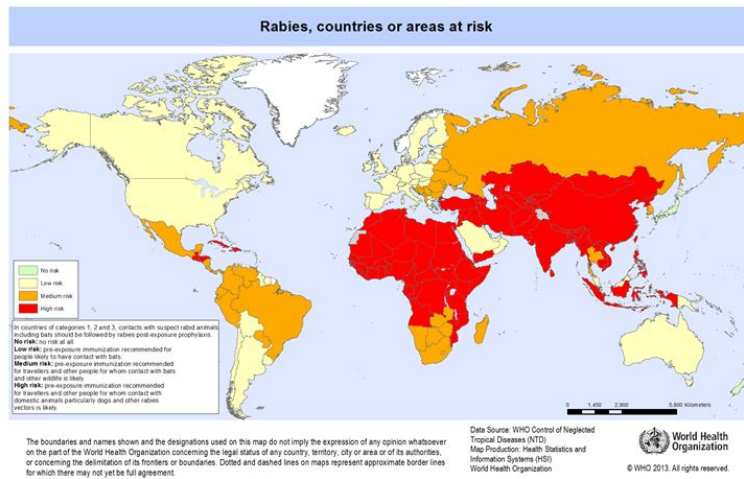
Vaccine should be given at **least 10 days** prior to departure because of the possible serious adverse reactions



Rabies:

- Transmission: animal bite or scratch
- Risk: occupational , travel to rabies risk countries
- Prevention; immunization, Preexposure, Post exposure and Immunoglobulin
- Inactivated vaccine
- Three doses on 0, 7, and 21 or 28 (intramuscular)

Pre-exposure vaccine eliminates the need for rabies immunoglobulin (RIG) after exposure, but does not eliminate the need for additional post exposure rabies vaccinations.



Tick-borne encephalitis:

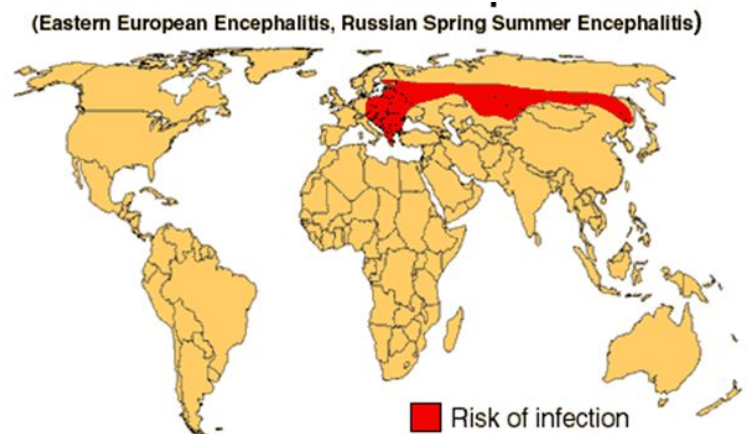
Transmission by:

1. Ixodes sp. Ticks
2. Ingestion of unpasteurized dairy products

- Rural forested areas of east and central Europe, Russia and parts of Asia
- March – November

Prevention:

- Tick prevention
- Avoidance of unpasteurized dairy products
- Vaccination
- **Self check and removal ASAP (tweezers)**



Other vaccines – influenza:

The risk:

- Risk of exposure to the virus is throughout the year in tropical and subtropical areas
- The attack rate is 1.2–2.8% in travelers of all age groups

The vaccine:

- Inactivated parenteral vaccine
- live attenuated vaccine administered by nasal spray (for healthy persons 5–49 years)

Recommended to travelers to:

North hemisphere: november to march

- tropics and subtropics at risk of serious related complications
- Southern Hemisphere from April through September

Other vaccines - Tuberculosis:

The vaccine:

- BCG vaccine
- Live attenuated
- Single intradermal injection
- Recommended to long stay in developing countries
- Baseline tuberculin before travel with a follow up every 1 year

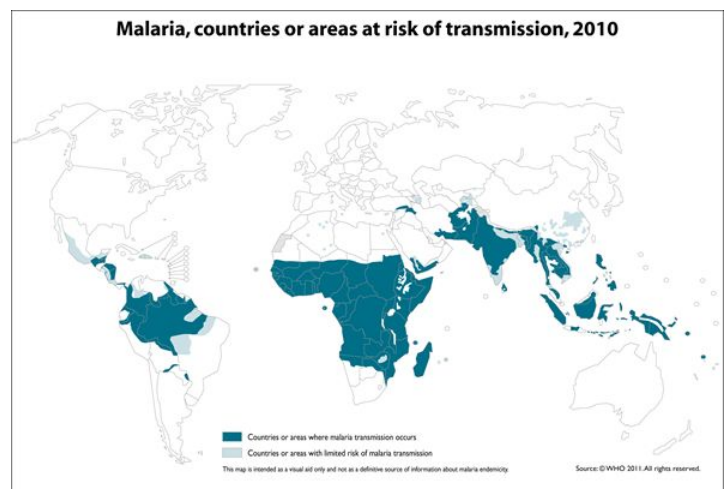
Chemoprophylaxis:

Malaria:

Transmission by mosquito bite

Prevention:

- Awareness
- **Bite avoidance**
- Chemoprophylaxis
- Diagnosis of febrile illness



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.



Fever in returned traveler is a medical emergency considered malaria until proven otherwise

Malaria chemoprophylaxis: (before, during and after traveling)

Proguanil (all areas):

- 1 – 2 days before departure, daily during the journey and 7 days after return

Doxycycline (all areas):

- 1 – 2 days before departure, daily during the journey and 4 weeks

Chloroquine (chloroquine sensitive areas):

- 1 – 2 weeks before departure, daily during the journey and 4 weeks after return

Primaquine (predominant vivax areas and ovale):

- 1 – 2 days before departure, daily during the journey and 7 days after return

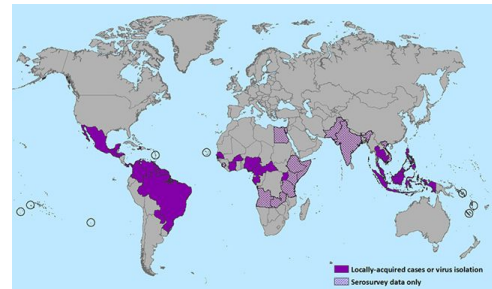
Mefloquine (mefloquine sensitive areas):

- 2 weeks before departure, daily during the journey and 4 weeks after return

Other infections:

Zika virus:

- Transmission by mosquito bite
- Risk to pregnant women which leads to **microcephaly and other brain abnormalities**
- Prevention: preventing mosquito bites



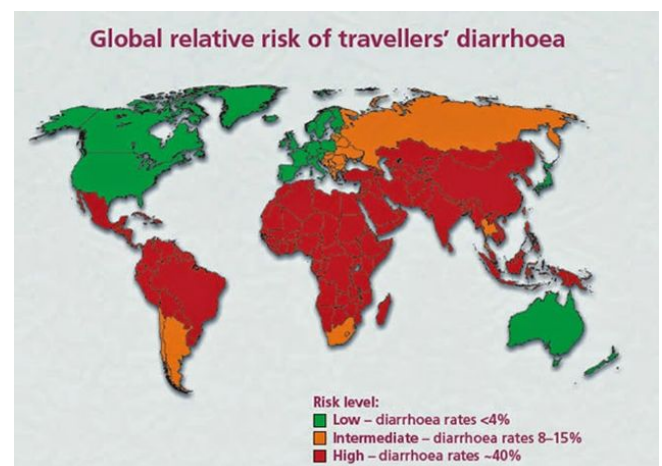
Traveler's diarrhea:

Cause:

- Bacterial (60-80%)
- Viral (10-20%)
- Parasitic (5-10%)

Prevention:

- **Wash It, Peel It***, Cook It, or Forget It
- Only Drink Bottled Water
- Wash hands frequently



Post-Travel Care:

Post-travel checkup: For endemic, long term travel or has chronic disease

- Long term travelers
- Adventure travelers
- Expatriates in developing world

Post-travel care:

- Fever, chills, sweats
- Persistent diarrhea
- Weight loss

Travelers' responsibilities:

- Decide on the travel destination and timing
- Recognize and accept risk
- Visit the general practitioner prior to traveling
- Obtain travel insurance
- Adhere to the preventive precautions
- Carry medical kits and understand its use
- Assume the responsibility of the health and safety of children
- Respect people and culture in country of destination
- Visit the general practitioner upon return

Responsibilities of traveler: check status of destination:

Warning level 1: Practice usual precautions

- Presence of usual risk for infectious diseases as diarrheal diseases and malaria

Warning level 2: Practice enhanced precautions

- Presence of MERS-CoV in Arabian Peninsula

Warning level 3: Avoid non-essential travel

- Presence of outbreak (Ebola) and adverse security situation

Responsibility of traveler: consult general practitioner:

Before departure:

Timing: 4 to 6 weeks

Purpose:

- Medical evaluation
- Risk assessment
- Receive preventive interventions
- Travel advice

After arrival:

- Have chronic diseases
- Spent >3 months in a developing country
- Received treatment for malaria while travelling
- Exposed to a serious infectious disease while travelling
- Experienced illness in the weeks following return (fever, persistent diarrhea, vomiting, jaundice, urinary disorders, skin disease or genital infection)

Responsibility of traveler: issue travel insurance:

Required in case of:

- Illness
- Accident
- Death

Covers:

- Changes to the itinerary
- Emergency repatriation for health reasons
- Medical care (illness and accidents)
- Hospitalization
- Repatriation of the body in case of death.

Precautions:

Food and Water Precautions:

- Bottled water
- Selection of foods: well-cooked and hot

Avoidance of

- salads, raw vegetables
- unpasteurized dairy products
- street vendors
- ice

Environmental Precautions:

- Air Travel
- Jet Lag
- Sun Protection
- Extreme Heat and Cold:
 1. dehydration, heat stroke
 2. hypothermia, frostbite
- Altitude
- Water recreation:
 1. Drowning, boating & diving accidents
 2. Risk of schistosomiasis or leptospirosis
 3. Biological and chemical contamination

Vector Precautions:

- Covering exposed skin
- Insect repellent containing DEET 25 – 50%
- Treatment of outer clothing with permethrin
- Use of permethrin-impregnated bed net
- Use of insect screens over open windows
- Air conditioned rooms
- Use of aerosol insecticide indoors
- Use of pyrethroid coils outdoors
- Inspection for ticks

Animal Precautions:

- Animal avoidance

Rabies:

- Specific animal threats
- Medical evaluation of bites/scratches
- Post exposure immunization and immunoglobulin

Envenomations:

- Snakes, scorpions, spiders
- Maritime animals

Injury and Crime:

Vehicles:

- Risk of road and pedestrian accidents
- Night travel
- Seat belts and car seats

Avoid the use of drugs and alcohol

Understanding local crime risks:

- Scam awareness
- Situational awareness
- Location avoidance

Summary

Travel medicine:

Seeks to **prevent illnesses and injuries occurring to travelers going abroad**, Refugee and migrant health.

Concerns :

- International travel carries a risk for travelers, community of origin and community of destination
- The risk for travelers includes diseases, injuries and death.

Types of travelers:

- Tourists
- VFRs (visiting friends and relations)
- Business travellers
- Migrant workers
- Pilgrims
- Refugees
- Expatriates
- Students

Special populations:

- Elderly travellers
- Infants and children
- Pregnant women
- Travellers with chronic diseases
- Travellers with disability
- Immunocompromised traveller

Special itineraries:

- Cruise ship travel
- Extreme travel
- Diving
- Mass gatherings (eg. The Hajj)
- Extended stay
- Wilderness/remote regions

Risk depends on destination

Components of travel medicine:

- Pre-travel
- During travel
- Post-travel

Pre-travel consultation:(4-6 weeks before departure)

Risk assessment (potential hazards)	Information about travelers	Information about trip
	Age and sex	destination
	Medical history	Length of stay
	medications	Mode of transport
	allergies	Purpose of trip
	Immunization history	Financial budget and insurance
	Special health needs	Health care in destination
Risk management (advice to reduce exposure to health risks)	<ul style="list-style-type: none"> ● Food and water safety and hand hygiene ● Insect bite prevention ● Immunization ● Malaria prevention ● Personal safety (RTA, fall, drowning, fire, robbery, STD) ● Environmental risks (sun exposure, heat, high altitude, motion sickness, DVT) ● Travelers with special needs (chronic disease, children, pregnant) ● Traveler’s medical insurance 	
Service delivery: immunization, prophylaxis or self-medications		
Empower traveler to manage his health		

Unintentional and intentional injuries:

- Road traffic injuries
- Interpersonal violence
- Injury in recreational water
- Animal bites (domestic and wild animals)
- Falls (unintentional)

Required immunizations:

Yellow fever (international health regulation)

Required for travelers to a country under the **International health regulations**.

Recommended: for travelers to endemic area.(Brazil)*

- Live attenuated virus vaccine
- Single subcutaneous injection
- Immunity starts after 10 days
- Valid for 10 years

Not recommended for:

- Infants < 9 months
- Immunocompromised patients
- Pregnant women
- Egg allergies
- HIV-positive individuals

Meningococcal meningitis: by Saudi Arabia for Hajj and Umrah and seasonal workers.

Required: by Saudi government for Hajj or Umrah.

Recommended: for travelers to endemic area.

- Quadrivalent polysaccharide (MPSV4; A, C, Y, W-135) or conjugated with diphtheria
- Single dose (injection)

Risk:

- **Sub-Saharan Africa (seasonal)**
- Saudi Arabia (Hajj)
- Crowded student dormitory situations

Protection:

- Protection is for 3–5 years in adults and older children
- Not effective for children below 2 years

Polio

- Transmission: contaminated food and water.
- Rare in travelers
- Prevention:
 1. Food, water, personal hygiene
 2. Vaccination (injectable, oral)

Polio in Saudi Arabia:

- In Saudi Arabia, proof of receipt of polio vaccine is **required** from travelers from endemic countries or countries vulnerable to infection or re-infection.
- within the previous 12 months and at least 4 weeks prior to departure
- All travelers from these countries will also receive 1 dose of OPV at border points on arrival in Saudi Arabia

Recommended immunizations (according to risk):

Hepatitis A, B

A:

- Endemic in many developing countries
- High mortality in elderly and pregnant women.
- Prevention by food, water, personal hygiene and immunization
- Two doses of inactivated vaccines (HAVRIX® or VAQTA®)
- First dose: 70 – 85% develop antibodies within two weeks
- Second dose: after 12 to 18 months leading 100% seroconversion
- If traveling in <4 weeks after 1st dose: immune globulin should be administered at a different anatomic injection site

Protection:

- 14 – 20 years in children
- 25 years among adults

Recommended:

- Travelers to the developing countries
- 2 years and older

B:

- Transmission: Blood-borne, sexual contact
- Prevention: Avoid risk factors, immunization
- Recombinant vaccine given by intramuscular injection
- Monovalent or combined with hepatitis A (for those ≥ 18 years)
- Regular schedule: 0-, 1-, and 6-month with no booster dose

Accelerated schedule for the combined vaccine only (FDA)

- 0-, 7-, and 21- days
- Booster dose at 1 year

Recommended for travelers to endemic areas and travelers with special risk

Typhoid

- Transmission: by contaminated food and water
- Prevention: food, water, personal hygiene and vaccination

Live attenuated (Ty21a):

- Oral vaccine
- Four doses (One capsule on alternating days not with antibiotics)
- Schedule should be completed at least one week before traveling
- Booster every 5 – 7 years

Vi capsular polysaccharide vaccine (ViCPS):

- Single dose intramuscular injection
- At least two weeks before traveling
- Booster at 2 years intervals

1. Both vaccines are effective but differ in duration of immunity
2. Compliance may be a problem with oral vaccine
3. Recommended to travelers to developing countries

<p>Cholera</p>	<ul style="list-style-type: none"> ● Transmission by contaminated food or water ● Rare in travelers ● Prevention: food, water, Personal hygiene and Vaccination (oral) ● Live attenuated oral vaccine ● Result in 60–80% protection for 6 to 12 months ● Not effective against serotype O139 (spread rapidly through Asia in mid 90s)
<p>Poliomyelitis</p>	<p>--</p>
<p>Japanese encephalitis</p>	<ul style="list-style-type: none"> ● Transmission: by mosquito bite ● Risk increases in travelers to rural Asia or long stay travelers. ● Prevention: vector control and vaccination ● Two available vaccines ● Given as three doses: 0, 7 and 30 days ● Accelerated schedule of two doses at 0 and 7 days (80% conversion) ● The last dose should be at least 10 days before departure ● Booster dose at 24 months if the risk continues <p>Vaccine should be given at least 10 days prior to departure because of the possible serious adverse reactions</p>
<p>Rabies</p>	<ul style="list-style-type: none"> ● Transmission: animal bite or scratch ● Risk: occupational , travel to rabies risk countries ● Prevention; immunization, Preexposure, Post exposure and Immunoglobulin ● Inactivated vaccine ● Three doses on 0, 7, and 21 or 28 (intramuscular) <p>Pre-exposure vaccine eliminates the need for rabies immunoglobulin (RIG) after exposure, but does not eliminate the need for additional post exposure rabies vaccinations.</p>
<p>Tick-borne encephalitis</p>	<p>Transmission by:</p> <ol style="list-style-type: none"> 1. Ixodes sp. Ticks 2. Ingestion of unpasteurized dairy products <ul style="list-style-type: none"> ● Rural forested areas of east and central Europe, Russia and parts of Asia ● March – November <p>Prevention:</p> <ul style="list-style-type: none"> ● Tick prevention ● Avoidance of unpasteurized dairy products ● Vaccination ● Self check and removal ASAP (tweezers)

Other vaccines

Influenza:	<p>The risk:</p> <ul style="list-style-type: none"> • Risk of exposure to virus is throughout the year in tropical and subtropical areas • The attack rate is 1.2–2.8% in travelers of all age groups <p>The vaccine:</p> <ul style="list-style-type: none"> • Inactivated parenteral vaccine • live attenuated vaccine administered by nasal spray (for healthy persons 5–49 years) <p>Recommended to travelers to:</p> <ul style="list-style-type: none"> • tropics and subtropics at risk of serious related complications • Southern Hemisphere from April through September
Tuberculosis:	<p>The vaccine:</p> <ul style="list-style-type: none"> • BCG vaccine • Live attenuated • Single intradermal injection • Recommended to long stay in developing countries • Baseline tuberculin before travel with a follow up every 1 year

Other infections

Zika virus:	<ul style="list-style-type: none"> • Transmission by mosquito bite • Risk to pregnant women which leads to microcephaly and other brain abnormalities • Prevention: preventing mosquito bites
Traveler's diarrhea:	<p>Cause:</p> <ul style="list-style-type: none"> • Bacterial (60-80%) • Viral (10-20%) • Parasitic (5-10%) <p>Prevention:</p> <ul style="list-style-type: none"> • Wash It, Peel It*, Cook It, or Forget It • Only Drink Bottled Water • Wash hands frequently

Chemoprophylaxis (before, during and after traveling)

<p>Malaria: Details in lecture you should study them</p>	<p>Transmission by mosquito bite</p> <p>Prevention:</p> <ul style="list-style-type: none"> • Awareness • Bite avoidance • Chemoprophylaxis • Diagnosis of febrile illness <p>Fever in returned traveler is a medical emergency considered malaria until proven otherwise</p>
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Post-Travel Care:

Post-travel checkup:

- Long term travelers
- Adventure travelers
- Expatriates in developing world

Post-travel care:

- Fever, chills, sweats
- Persistent diarrhea
- Weight loss

Travelers' responsibilities. Details in lecture

check status of destination.

consult general practitioner:

Before departure:

Timing: 4 to 6 weeks

issue travel insurance

Precautions:

Food and Water Precautions.

Environmental Precautions.

Vector Precautions.

Animal Precautions.

Injury and Crime:

Vehicles:

Risk of road and pedestrian accidents

Night travel

Seat belts and car seats

Avoid the use of drugs and alcohol

Understanding local crime risks:

Scam awareness

Situational awareness

Location avoidance

Good luck!

