PREPARING A PT FOR TRAVEL

1. Diseases spread through **food** and **water**
2. Diseases spread through **blood** and **bodily fluids**
3. Diseases transmitted by **insects**

DISEASE TRANSMITTED THROUGH FOOD AND WATER

DISEASE	NOTES	PX/TX
TRAVELER'S DIARRHEA *E. coli* (80-90%) *Campylobacter jujuni* *Shigella* *Salmonella*	- **Dysentry** - if blood is in the stool (classified as severe). - Mild: tolerable, doesn't interfere with activities - Mod: distressing, interferes with planned activities - Severe: incapacitating, completely prevents activities - Onset of sx: 6-72 hrs - Untreated TD:3-7 days - Persistent TD = >14 days - TD can result in IBS	**RULE:**" cook it, peel it, or forget it" **PX:** - Bismuth subsalicylate (BBS), Pepto-Bismol - Abx is not usually rec., give to high risk pts - Recommended Abx: **Rifaximin** **TX:** Hydration (↑ fluid and salt) Mild: **Loperamide** Mod: ***Loperamide** +/- **antibiotics** Severe: **Azithromycin** 1g x 1 +/- **Loperamide** **Note:** Loperamide = 'IMODIUM A-D'
TYPHOID FEVER *Salmonella typhi*	- Can be severe and life-threatening - Vaccines are 50-80% effective - Wash hands and take food/water precautions even if vaccinated	**Vaccines:** **Vivotif** - Oral, live, attenuated - Dont use if on Abx or stomach's sensitive - Q5yrs - 1 week before traveling - Don't use <6yo **Typhim Vi** (inactivated, IM) - Q2yrs - ≥ 2 weeks before - Don't use <2yo
CHOLERA *Vibrio cholerae*	- "Rice water stools"	**Vaccines:** **Vaxchora** - Live-attenuated - Single, oral - Min: 10 days before - Age: 18-64

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DISEASE TRANSMITTED THROUGH FOOD AND WATER (cont)

POLIO
- Vaccine given in childhood
- Single lifetime booster dose min 4 wks prior to travel is recommended for adults who are traveling to regions with it
- May have to show proof of vaccination
- Documented on Certificate of Vaccination or Prophylaxis (ICVP)

HEPATITIS A
- At highest risk: person traveling from developed country to developing countries
- Can be asymptomatic
- Symptoms: fever, malaise, jaundice, nausea, abdominal discomfort

DISEASES TRANSMITTED THROUGH BLOOD & BODILY FLUIDS

HEPATITIS B
- Cause: blood and bodily fluids
- Incubation of 90 days
- Sx: malaise, jaundice, nausea, GI discomfort
- Chronic infection can result in chronic liver disease or liver cancer
- Vaccine is really important if travelers plan on:
  - Receive medical care
  - Provide medical work
  - Have sex w/ new partners
- Avoid piercings/tattoos
- 3-dose vaccine series
- 6 mo to complete
- Receive as many doses as possible before traveling
  - Can complete upon return
- High risk: May admin accelerated series
  - Requires booster dose at 1 yr for long-term immunity

MENINGOCOCCAL MENINGITIS
N. menigitidis
- Belt of Africa (Dec-Jun)

- Cause: **respiratory secretions**
- High mortality rate
- Medical emergency
- Sx: fever, HA, nausea, stiff neck, mental changes
  - Requires urgent tx
- Quadrivalent vacine containing 4 bacterial types: ACWY
- Required by Saudia Arabia govt. during annual Hajj and Umrah pilgrimages

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DISEASES TRANSMITTED BY INSECT BITES

THESE ARE ALL TRANSMITTED BY MOSQUITOES

DENGUE *Aedes aegypti* *Aedes albopictus*	- Asymptomatic - Can develop life-threatening disease - Sx: shock, severe bleeding, organ failure	- No vaccine -**Tx:** Supportive care
MALARIA *Anopheles* mosquito	- Multiplies in the liver and then moves into RBCs - Sx: shaking chills, high fever, flu-like illness Types: - *Plasmodium vivax* `(most common)` - *P. falciparum* `(most deadly)` - *P. malariae* - *P. ovale*	**Quick start PX:** - Atovaquone/Proguanil `(Malarone)` - Doxycycline `(Doryx, Vibram ycin)` - Primaquine (most effective against P. vivax) **Advance start PX:** - Chloroquine - Mefloquine `(Lariam)`
JAPANESES ENCEPHALITIS	- Sx: asymptomatic or Sx: encephalitis w/ rigors & seizure risks, coma, and death - Mostlikley infected in rural agricultural areas	**PX**: reduce exposure to mosquitoes **Vaccine:** *IIxiaro* - Age > 2 mo - who's spending time outdoors or - who's staying min 1 mo in endemic areas
YELLOW FEVER	- Sx: most are asymptomatic, influenza-like sx, risk of shock and organic failure	**Vaccine:** YF-VAX - Live-attenuated - Contra: hypersensitivity to eggs - ICVP ("yellow card") provided after - Card is only valid if completed 10 days before **TX:** symptomatic relief with fluids, analgesics, and antipyretics - Aspirin and other NSAIDs **cannot** be used (↑ risk of bleeding)

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DISEASES TRANSMITTED BY INSECT BITES (cont)

ZIKA VIRUS
Aedes

- Sex or blood transfusion-associated transmission
- Sx: fever, maculopapular rash, arthralgia, conjunctivitis
- Caused babies to be born with microcephaly
- No vaccine
- Use condom
- Avoid mosquitoes
- Do not travel to areas if pregnant

- Insects that transmit disease are vectors
- Stay and sleep in screened or rooms w/ AC
- Use bed net (can be pre-treated w/ repellant)
- Cover exposed skin
- DEET: mosquito repellant
- Picaridin, oil of lemon, eucalyptus, or IR3535: mosquito repellant (not ticks)
- Permethrin to treat clothing, gear, bed nets
  - Do **not** apply directly to skin

ADDITIONAL CONCERNS FOR TRAVELING INDIVIDUALS

VENOUS THRMBOEMBOLISM PX

PX:
- Compression stockings
- Walk
- Lower leg exercises

ALTITUDE SICKNESS AND MOTION SICKNESS

- Acute mountain sickness (AMS)
  - Occurs when you climb rapidly to a high altitude

PX:
- Acetazolamide `(Diamox)` 125 mg BID day before (preferred) or day of
  - Contra: sulfa allergy
  - AE: rash, taste alteration, dehydration, photosensitivity, urticaria

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