International Travel

Airplane Travel

- When traveling with young infants on the plane, if possible you may want to use a car seat. You should check with the airline if this is feasible. There is the possibility that you may have to pay for an extra ticket, but often an infant is free (children under 2yo) as long as you do not take up an extra seat.
- Most airlines will gate check bulky strollers or car seats for free. You will need to provide a bag for protection if desired.
- It is a good idea to wear the baby in a carrier if possible while walking through the airport, to free up your hands for all the challenges of navigating through security lines and breaking down the stroller.
- Many parents inquire about sedation or "help with sleeping" for long trips. While parents often use Benadryl to make their children sleepy for long plane rides, we do not advise this (we think the risks outweigh the benefits) and would suggest that children be allowed to fall asleep on their own.
- Finally, on take-off and landing, try to breast feed/bottle feed children or allow them to chew on gum if old enough. This helps to equilibrate the middle ear pressure and prevents pressure-related earache.

Mosquito Repellent

In 2001 the Environmental Protection Agency made the following recommendations regarding the safe use of insect repellent with DEET for children:

- Do not apply to infants under two months of age. (Skin permeability becomes similar to adult by the second month of life.)
- Read and follow all directions and precautions on the product label.
- Do not apply over cuts, wounds or irritated skin. Do not apply to young child's hands, eyes, or mouth.
- Do not allow young children to apply products themselves.
- Use just enough to cover the exposed skin and/or clothing. Do not use under clothing.
- After returning indoors, wash treated skin with soap and water.
- Wash treated clothing before wearing again.
- Do not use spray solutions in enclosed areas or near food.

Experts agree that insect repellents containing DEET are the most effective. Years of DEET use have resulted in relatively few reports of adverse reactions. Most reported incidents have not been serious.

The American Academy of Pediatrics states that a 30 percent concentration is safe for both children and adults, but that 10 percent can be used for children if parents are concerned about the potential risks of deet or if the threat of disease-carrying mosquitoes is small.

Even when the insect repellent you select does not contain DEET, citronella and other more "natural" repellents (which are less effective) could cause problems in a young child if used liberally on the skin. Look into clothing that is both light for summer weather but also long enough to cover the skin, and use insect repellent sparingly. Mosquito nets over strollers and car seats can also protect young children.

Sunscreen

Choose a sunscreen that protects against **both UVA and UVB rays**. Babies under 6 months of age should be kept out of the sun as much as possible - try to use a wide brimmed hat and loose fitting clothing to shield them. For children six months and older, we recommend at least SPF 30 strength sunscreen. Also, remember that sunscreen should be re-applied every 2 hours.

Sunscreen loses its potency with age, so make sure your child's sunscreen is not expired or over two years old.

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CDC Recommendations

For more extensive information, please visit the Centers for Disease Control website at **www.cdc.gov/travel.**

****You can also find information on each specific country to be visited and indicated vaccines and recommendations on anti-malaria medications, etc., on the CDC website.**

- If you're unsure of whether the drinking water or ice is safe, drink beverages that have been prepared with boiled water or are canned or bottled.
- All raw foods are susceptible to contamination. Be careful when eating salads, uncooked fruits and vegetables, and raw meat.
- Do not eat food from street vendors.
- Bring long-sleeved shirt, long pants, and a hat to wear whenever possible while outside, to prevent illnesses carried by insects.
- For mosquito prevention, use bed nets treated with permethrin or deltamethrin.
- Make sure you bring enough of your prescription medication to last you during your trip. Also, you may want to bring a copy of your prescription.
- To prevent fungal and parasitic infections, keep feet clean and dry, and do not go barefoot, even on beaches.
- Do not handle animals.

Malaria

- Risk of Malaria may be high in some of the countries in certain countries. The CDC country-specific website would be the best source of information (there are malaria maps showing areas of more or less risk within each country). Antimalarial medications can be prescribed from your doctor or obtained from the clinics listed below. Please call us or set up an appointment to receive medical consultation regarding this matter—they may need to be started in advance of travel and they may have side effects to discuss.
- Overall, the most important anti-malarial measure would be the avoidance of mosquito bites while traveling in endemic areas, so please reference the insect repellent and mosquito net advice in this handout.

Vaccinations

Visit your doctor 8-12 weeks before your trip to receive necessary vaccinations.

- These vaccinations (Hepatitis A, Hepatitis B, Tetanus-Diphtheria-Pertussis, and Measles) are recommended but are routinely given and will likely be up to date in all of our patients.
- If you're traveling to an underdeveloped region and especially if your trip is longer than one month, Typhoid vaccine and/or the Japanese Encephalitis Vaccine (see following pages) may be recommended.
- For certain countries, the Meningococcal vaccine (routinely given at the 11yr and 16yr check-up) may be recommended for children under 11yrs of age.
- Rabies vaccination is generally not recommended but may be necessary depending on if you will have extensive unprotected outdoor exposure in rural areas.

International Vaccinations are available at these clinics:

- **International Medicine Center**
  9230 Katy Fwy #400
  Houston, TX 77055
  713-550-2000

- **Texas Children's Hospital Travel Medicine Clinic**
  Texas Children's Clinical Care Center
  6701 Fannin Street, Floor 17
  Houston, TX 77030
  832-822-1038
  http://www.texaschildrens.org/Locate/Departments-and-Services/Travel-Medicine/

- **Texas Children's Hospital West Campus**
  Retrovirology Travel Clinic
  18200 Katy Freeway
  Houston, TX 77094
  832-822-1038
  westcampus.texaschildrens.org

- **Passport Health**
  9601 Katy Freeway, Suite 315
  Houston, TX 77024
  713-467-6575

- **Houston Travel Medicine Clinic**
  Bonnie Word, MD
  St. Joseph Professional Building
  2000 Crawford St., Suite 1105
  Houston, TX 77002
  713-652-4900
  http://www.houstontravelmedicine.com

- **Baylor Travel Medicine**
  3701 Kirby Dr., Suite 100
  Houston, TX 77098
  713-798-7700

For more locations, please check:
http://wwwnc.cdc.gov/travel/yellow-fever-vaccination-clinics/state/texas

Typhoid Vaccine

Two typhoid vaccines are currently available for use in the United States: an oral live, attenuated vaccine (Vivotif Berna vaccine, manufactured from the Ty21a strain of S. Typhi by the Swiss Serum and Vaccine Institute) and a Vi capsular polysaccharide vaccine (ViCPS) (Typhim Vi, manufactured by Aventis Pasteur) for intramuscular use. Both vaccines have been shown to protect 50%-80% of recipients. The intramuscular heat-phenol-inactivated vaccine (manufactured by Wyeth-Ayerst) has been discontinued. The table below provides information on vaccine dosage and administration. The time required for primary vaccination differs for the two vaccines, as do the lower age limits for use in children.

Primary vaccination with oral Ty21a vaccine consists of a total of four capsules, one taken every other day. The capsules should be kept refrigerated (not frozen), and all four doses must be taken to achieve maximum efficacy. Each capsule should be taken with cool liquid no warmer than 37°C (98.6°F), approximately 1 hour before a meal. This regimen should be completed 1 week before potential exposure. The vaccine manufacturer recommends that Ty21a not be administered to infants or children <6 years of age.

Primary vaccination with ViCPS consists of one 0.5 mL (25 µg) dose administered intramuscularly. One dose of this vaccine should be given at least 2 weeks before expected exposure. The manufacturer does not recommend the vaccine for infants <2 years of age.

Vaccination	Age (yrs)	Dose/mode of administration	No. of doses	Dosing interval	Boosting interval
Oral, live, attenuated TY21a vaccine					
Primary series	≥ 6	1 capsule[1]/ oral	4	48 hours	Not applicable
Booster	≥ 6	1 capsule[1]/ oral	4	48 hours	Every 5 years
Vi Capsular polysaccharide vaccine					
Primary series	≥ 2	0.50 mL/ intramuscular	1	Not applicable	Not applicable
Booster	≥ 2	0.50 mL/ intramuscular	1	Not applicable	Every 2 years

Japanese Encephalitis Vaccine

The recommended primary immunization series is three doses of 1.0 mL each, administered subcutaneously on days 0, 7, and 30. An abbreviated schedule of days 0, 7, and 14 can be used when the longer schedule is impractical. Both regimens produce similar immunity among recipients. Two doses given a week apart may be used in unusual circumstances and will confer short-term immunity in 80% of vaccinees. The last dose should be administered at least 10 days before beginning travel to ensure an adequate immune response and access to medical care in the event of any delayed adverse reactions (refer to table below). Many Asian countries have adopted a schedule of two primary doses approximately 4 weeks apart, followed by a booster after 1 year, with subsequent boosters at 3-year intervals. The duration of immunity after serial booster doses has not been well established.

Immunization routes and schedules for infants and children 1-3 years of age are identical except that 0.5 mL doses should be administered. No data are available on vaccine efficacy and safety in infants <1 year of age. The full duration of protection is unknown; however, preliminary data indicate that neutralizing antibodies persist for at least 2 years after primary immunization. In infants and children whose primary immunization series included 0.5 mL doses, a 1.0 mL booster dose (0.5 mL for children <3 years of age) may be administered 2 years after the primary series.

Doses[1]	1-2 years of age	≥ 3 years of age	Comments
Primary series 1, 2, and 3	0.5 mL	1.0 mL	Days 0, 7, and 30
Booster	0.5 mL	1.0 mL	1 dose at 24 months or later[2]

[1]Administered by the subcutaneous route

[2]For vaccinees who have completed a three-dose primary series, the full duration of protection is unknown; therefore, definitive recommendations cannot be given.

MMR Vaccine

Before traveling outside the U.S., children 12 months of age and older should receive two doses of MMR separated by at least 28 days. Children age 6-11 months, if they must travel outside the U.S., should receive monovalent measles vaccine before departure if it is available, or MMR if monovalent measles vaccine is not available. However, MMR given before age 12 months should not be counted as part of the routine series. Children who receive MMR before age 12 months will need two more doses of MMR, the first of which should be administered at 12 months of age. MMR is typically administered at the 1yr and 4yr check-up as a routine part of the CDC immunization schedule.

Meningococcal Vaccine(s)

Persons aged 9 months through 55 years. Persons aged 9 months through 55 years at increased risk for meningococcal disease should receive MenACWY. Infants aged 9 through 23 months are recommended to receive a 2-dose primary series with a dosing interval of 12 weeks. Infants who have been vaccinated with Hib-MenCY-TT (not used at Blue Fish) do not need to receive MenACWY unless they are traveling to areas with high endemic rates of meningococcal disease and require protection with Serogroups A and W. Persons aged 2 through 55 years are recommended to receive a single dose or a 2-dose primary series based on the indication for vaccination. The MenACWY vaccine is typically administered at the 11yr and 16yr check-up as a routine part of the CDC immunization schedule.