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Vaccine Information

The following information is being provided to you to help you understand the possible side effects of the vaccine(s) we may recommend. The yellow fever vaccine is the only vaccine REQUIRED for entry into certain countries. Certain countries, such as Saudi Arabia, may require documentation of other vaccines (e.g. meningococcal) as part of the visa application process.

Most people experience minimal side effects from vaccines, mainly pain or tenderness at the vaccine injection site. There is a very small risk of having a severe, potentially life-threatening allergic reaction (anaphylaxis) whenever you receive a vaccination. The list below includes a number of side effects that have been infrequently or rarely encountered. We tell you about them so that you can make an informed choice about receiving the vaccines.

**Hepatitis A**
Hepatitis A is a virus that affects the liver and is acquired by consuming contaminated food or water. The hepatitis A vaccine is recommended for travelers to regions where hepatitis A is common (most developing countries). This vaccine should ideally be given at least 2 weeks prior to travel to endemic areas. A booster is recommended at 6-18 months to provide long-term immunity. The main side effect is pain at the injection site. Rarely, people may experience fever or fatigue. This vaccine may be given to children >1 year of age. You should not receive this vaccine if you have an allergy to aluminum.

**Hepatitis B**
Hepatitis B is a virus that affects the liver and is acquired through contact with infected blood or body fluids. Immunization requires three injections, with the booster doses given one month and 6 months after the first shot. It is not recommended for most short-term travelers. This schedule may be accelerated depending on your risk of acquiring Hepatitis B during travel. Pain at the site of injection, similar to that of a Tetanus injection, occurs most commonly. You should not receive this vaccine if you have a hypersensitivity to yeast.

**Twinrix**
This is a combination vaccine for Hepatitis A and B and may be offered in certain situations. It is also a 3 shot series, with booster doses given one month and 6 months after the first shot. This schedule may be accelerated in certain situations. Side effects are similar to the individual Hepatitis A and B vaccines.

**Japanese Encephalitis (JE)**
JE is a mosquito-borne viral infection that affects the brain. Infection can lead to seizures and even death. It occurs in certain parts of rural Asia during certain times of the year. People traveling to rural areas, particularly near rice paddies and pig farms for longer than 3-4 weeks are at highest risk. Most short-term travelers going to major
cities in Asia are not at risk. However, long-term travelers planning to stay in very rural areas may be at risk. There are two vaccines currently available.

1) **Ixiaro:** This is only approved for persons **older than age 17.** It is a killed vaccine and is given as a **two shot series** with the shots given **28 days apart.** Most common side effects are pain at the injection site, headache and body aches.

2) **JE-VAX:** This is only given to children between the **ages of 1 and 17.** It is a killed vaccine given as a **3 shot series** given on **days 0, 7 and 28.** An accelerated course may be given: days 0, 7, and 14, but this may not be as effective as the standard schedule. The last dose of the series should be given at least 10 days prior to departure. Booster doses may be given after 2 years. Soreness at the injection site, fever, headache, muscle soreness, and dizziness may occur. Allergic reactions including rash, swelling of the hands or lips, difficulty breathing occurs very infrequently. These allergic reactions usually occur within 48 hours, but can occur up to 10 days after the last vaccine. People with a history of a life-threatening allergic reaction to mouse protein or thimerosol, should not receive this vaccine. People with severe allergies, especially with a history of hives or wheezing after medications or wasp/bee stings, should not receive this vaccine. Pregnant women or nursing mothers should not receive this vaccine.

**Measles**

Measles is a highly-contagious viral infection spread by coughing or sneezing. Measles outbreaks have occurred world-wide during recent years. It is recommended that people born after 1957 receive at least 2 doses of the measles vaccine or the MMR (measles, mumps, rubella vaccine) if not previously vaccinated. Most people born before 1957 are likely to be immune by virtue of having been naturally infected. The vaccine contains live viruses. The most common side effect is pain at the injection site. Fever, allergic reactions, joint pain and swollen glands occur rarely. This vaccine should NOT be administered to people with altered immune systems, pregnant women, or to women who expect to become pregnant within three months following vaccination. We generally give measles vaccine along with mumps and rubella (MMR).

**Meningitis**

Meningitis is an infection of the brain caused by many types of bacteria. The meningococcal vaccines protect against some types of meningitis caused by *Neisseria meningococcus*. This vaccine is recommended for travelers to countries or regions known to have epidemics of meningococcal disease. These areas include sub-Saharan countries (from Mali east to Ethiopia during the dry season) and Saudi Arabia during the Hajj or Umra. The most common side effect is pain at the injection site and rarely fever. Currently there are two forms of meningococcal vaccine available:

a. **Menactra:** is the newer vaccine and is expected to replace the older formulation over the next few years. Currently, it is approved for persons between the ages of **2-55.** The need for and the timing of a booster dose of Menactra have not yet been determined. A serious nervous system disorder called Guillain-Barre Syndrome (GBS) has been reported among a few people who received Menactra.
It is not yet clear whether the vaccine led to GBS or not. 26 cases occurred out of >15 million doses given.

b. **Menomune:** is the older formulation and is used for vaccinating persons older than 2 years of age. This vaccine is effective for about 2-3 years. The most common side effect of both vaccines is soreness at the injection site.

**Polio**

Polio is a viral infection that can cause permanent neurologic damage. Polio is still present in some developing countries including Saudi Arabia, India and certain parts of Africa. Most people in the U.S. have received a primary series of polio vaccine during childhood and will require only a booster injection if traveling to an area where polio remains a risk. Only one booster in your adult lifetime is needed. If you have NOT had the primary polio vaccine series, you may need to start that series prior to travel. The only vaccine available in the US is the injectable killed vaccine. People with known severe allergies to the antibiotics Streptomycin or Neomycin should not receive this vaccine.

**Rabies**

Rabies is a fatal viral illness transmitted by a bite from an infected animal. Rabies is very common in dogs, monkeys and bats in developing countries. We may recommend the *pre-exposure* rabies vaccine series to you if your travel plans or activities are likely to place you at high risk of exposure to rabies.

1. **Pre-exposure rabies series:** 3 injections given at **day 0 (visit date), day 7 and day 21-28.** Side effects are primarily limited to discomfort at the injection site. Headache, nausea, muscle aches, fatigue and low-grade fevers rarely occur. If it has been 2 or more years since you have received this vaccine series, you should have an antibody level checked and, if low, should have a single *booster* dose of the vaccine. There is a 6% risk of having an immune complex-like reaction after the booster dose, occurring 2-21 days afterward and characterized by itching, rash and a feeling of being unwell. Rabies vaccine can be given to children 1 year of age and older.

2. **Post-exposure rabies series:** wash wound thoroughly
   a. If you do NOT receive the pre-exposure vaccine and you are exposed to a rabid animal, you MUST seek medical attention immediately. You must receive **rabies immune globulin (RIG)** and 4-5 doses of the rabies vaccine (day 0, 3, 7, 14, (28)). If the medical facility does not have RIG, you MUST be seen at a facility that does as soon as possible.
   b. If you DO receive the pre-exposure vaccine and you are exposed to a rabid animal, you MUST seek medical attention immediately. You do NOT need rabies immune globulin (RIG) but you do need 2 shots of the rabies vaccine (day 0 and 3).
**Tetanus/Diphtheria/Pertussis**

Most people have received primary immunization against tetanus, diphtheria and pertussis. Tetanus shots protect against the bacteria that causes lockjaw when a cut gets dirty. Boosters are required every 5-10 years. Diphtheria is a bacterial illness characterized by severe sore throat. It remains an important problem in developing countries and in areas such as the former Soviet Union. The tetanus and diphtheria booster may be given with a pertussis booster. Pertussis is the cause of “whooping cough.” The most common side effect of the vaccine is pain at the injection site that can last for a few days. Fever, drowsiness, irritability or loss of appetite can rarely occur. People who have had serious reactions to this vaccine should not receive it again.

**Typhoid Fever**

Typhoid Fever is a serious bacterial illness acquired by consuming contaminated food and water. There are currently 2 vaccines available for the prevention of typhoid fever. They both offer similar levels of protection but vary in terms of side effects.

1. **Typhim Vi:** is an injectable vaccine that is effective for 2-3 years and needs to be given 2 weeks prior to departure. It can be given to children 2 and older. The most common side effect is arm soreness.

2. **Vivotif:** is an oral vaccine that consists of 4 doses of a live vaccine in capsule form that is effective for 5 years. The capsule must be taken every other day on an empty stomach (1 hour before or 3 hours after eating). The pills must be refrigerated and cannot be taken at the same time as antibiotics. The last pill must be taken at least a week prior to travel. Uncommon side effects include nausea, vomiting, abdominal pain, fever or rash. This cannot be given to children less than 6 years old. If you have any condition that affects your immunity (HIV, cancer, on steroids or chemotherapy) or if you are pregnant, you should not receive this vaccine. It is generally not covered by insurance and costs about $60 at the pharmacy.

**Yellow Fever**

Yellow fever is a severe and potentially fatal mosquito-borne viral illness common in parts of Africa and South America. The Yellow Fever vaccine contains live viruses. You need only one injection every 10 years. People who should generally not receive this vaccine include those who have an egg allergy, an altered immune system (e.g. those who are taking steroids or cancer drugs, are HIV-positive), are pregnant, or are less than 9 months of age. We will sometimes make exceptions depending on the nature of the underlying problem and the risk of the trip. We can provide a Certificate of Exemption for individuals who cannot receive the vaccine. Allergic reactions, including anaphylaxis, to the egg component can occur in people with severe egg allergies. In addition, post vaccination complications such as neurological disorders (meningitis, encephalitis, nerve disorders, paralysis) and systemic illness (fever, headache, joint pain, and jaundice) occur very rarely, but are more frequent in persons over 60.
Food and water precautions are of major importance when traveling to many developing countries. Countries that are thought to have safe water are the US, Western Europe, Japan, Australia and New Zealand. Below are some precautions we suggest you observe to minimize your risk of developing a gastrointestinal illness as well as typhoid fever and Hepatitis A.

1. Drink only bottled beverages or mineral water (preferably carbonated).
2. Use bottled water even for brushing your teeth.
3. Filtered, boiled water is safer than iodine or chlorine-treated water. A filtering system that is impregnated with iodine or chlorine may also be used. A UV light source, known as a SteriPEN® may also be used to purify water. This is available at camping goods stores.
4. Avoid ice as it is often made with tap water; bacteria can survive freezing for more than 7 days!
5. Avoid raw vegetables and salads. Only eat fruit and vegetables that can be peeled.
6. Avoid unpasteurized dairy products such as ice cream, cheese and yogurt.
7. Avoid raw or undercooked meat, poultry and seafood (e.g. ceviche)
8. Avoid food or drinks from street vendors and buffets. Avoid open salsas, sauces and condiments.

Traveler’s Diarrhea

20-50% of travelers to developing countries will experience diarrhea. Traveler’s diarrhea is an illness characterized by the abrupt onset of watery diarrhea (usually 3-4 episodes over a short period of time), nausea, abdominal cramps, and sometimes low grade fever. It is usually caused by a bacterial infection acquired by eating contaminated food. Careful adherence to the food and water precautions listed above can help to decrease your risk of developing traveler’s diarrhea.

Antibiotics may be taken to shorten the duration and decrease the severity of traveler’s diarrhea. Self-treatment with antibiotics should be started shortly after the symptoms described above develop. Imodium (loperamide) or Lomotil (diphenoxylate/atropine) may be taken along with the antibiotics to slow down intestinal motility and decrease frequency of bowel movements. They should not be taken, however if you have a high fever or blood in the stool (dysentery).
We may prescribe one of the following antibiotic regimens, depending on your itinerary. You should take these antibiotics *only* if you develop diarrhea. If at any point during treatment, you should develop high fevers or blood in the stool you should seek medical attention.

1. **Ciprofloxacin (Cipro):** Take one 500 mg pill by mouth twice a day for up to 3 days. If symptoms quickly resolve after the first 24 hours of antibiotics, you do not have to complete 3 days of treatment. This medication should not be taken by children less than 18 years of age or by pregnant women.

2. **Azithromycin (Zithromax):** take one 500 mg pill by mouth once a day for up to 3 days. Lower doses are necessary for children and are based by weight. Children’s azithromycin will usually come in a powdered form with instructions to mix with sterile water just prior to use. Once the solution is made, keep refrigerated. Discard after 5-10 days.

3. **Rifaximin (Xifaxan):** take one 200 mg pill by mouth three times a day for 3 days. Not approved for use in children less than 12 years of age.
Prevention of Mosquito-Borne Diseases

Mosquitoes carry many infectious diseases common in the developing world including Malaria, Dengue, Yellow Fever, Japanese Encephalitis and Chikungunya. Mosquitoes that carry malaria and Japanese Encephalitis bite from dusk till dawn. Mosquitoes that carry Dengue, Yellow Fever and Chikungunya bite throughout the day and cause disease in urban as well as rural areas. One of the best ways to prevent these diseases and other insect-borne infections is to adhere to Personal Protective Measures.

PERSONAL PROTECTIVE MEASURES

1. If practical, wear clothing that covers the arms and legs.

2. Apply an insect repellent (bug spray) to exposed skin. The most effective repellents are those that contain DEET (20-35% for adults and up to 30% for children) or Picaridin (>19%). Concentrations of DEET >35% offer no additional protection and can be more irritating. DEET is 100% safe when used appropriately. All repellents should be applied frequently, especially after swimming or excessive sweating.

3. Sleep in a screened or closed, air conditioned room if possible. If a screened room is not available sleep under a bed net, ideally one that has been impregnated or sprayed with permethrin.

4. Avoid strongly scented soaps, perfume or other skin care products as these tend to attract mosquitoes.

5. Permethrin is an insecticide that can be applied to clothing and bed netting (but not to skin). It comes as a spray or a solution and can be purchased at camping goods stores such as the following:
   c. www.travmed.com 800-872-8633
Malaria Prevention

Malaria is a potentially life threatening disease that occurs when an infected Anopheles mosquito bites a person and injects malaria parasites into the blood. Of the 5 species of malaria parasites that can infect humans, P. falciparum is the most dangerous. Symptoms of malaria infection include high fever, chills, muscle aches, headache and sometimes vomiting, diarrhea and cough. Patients with severe malaria may develop kidney or liver failure, severe anemia (low blood red blood cell counts), seizures and even coma. The time between mosquito bite and the onset of disease is usually 10-14 days but may be longer in patients who have taken incomplete or inadequate malaria prevention medication. If malaria is suspected, medical care must be sought immediately. A blood sample should be taken to diagnose malaria. Some forms of malaria may not cause symptoms till many months after you return home. It is very important that you tell any physician evaluating you that you traveled to a malarious area.

In many parts of the world, malaria parasites have become resistant to commonly used antimalarial drugs. In some parts of the world malaria rates have significantly decreased and antimalarials are only necessary for travel to particular regions of a country. The decision to provide antimalarials and which drugs are offered is made based on your specific itinerary.

ANTIMALARIAL DRUGS

Antimalarial drugs (prophylaxis) DO NOT guarantee protection, so personal protective measures as described above should be adhered to. The most commonly prescribed antimalarials are listed below. Your doctor will discuss which may be right for you. Please be aware that antimalarials that may be purchased in developing countries may be ineffective, counterfeit or toxic. We strongly recommend that you fill your prescriptions before you leave the US and that you take them exactly as prescribed.

1. **Atovoquone/Proguanil (Malarone):** Take one tablet daily beginning one day before entering the malarious region, then daily while in that region, then for 7 days after leaving the malarious region. The medication is generally well tolerated. Nausea or upset stomach may occur on occasion. This medication also comes in a pediatric formula. We will determine the dose based on weight of the child.

2. **Mefloquine (Larium):** Take one tablet once a week starting 1-2 weeks prior to departure, then once a week, every week in the malarious region, then once a week for 4 weeks after departing the region. The medication should be taken the same time every week. Side effects include vivid dreams and insomnia. Occasionally people may feel anxious or depressed. People with a history of seizures or any kind of psychiatric problems should NOT take mefloquine. If you are on a medication to treat an abnormal heart rhythm, you should NOT take mefloquine. For children, the pills may be cut into halves or quarters and dosed...
according to weight. The pills may be crushed and mixed with juice or applesauce, etc.

3. **Chloroquine (Aralen):** Take one tablet once a week beginning one week prior to departure, then once a week, every week in the malarious region, then once a week for **4 weeks** after departing the region. The medication should be taken the same time every week.

4. **Doxycycline:** Take one tablet daily starting 1-2 days before entering the malarious region, then daily while in that region, then for 4 weeks after leaving that region. This medication can cause significant sun sensitivity. You should use a sunscreen with at least SPF 30 even if you are dark skinned. It can also cause some esophageal (throat) irritation. Always take with a lot of water and avoid lying down for about 30 minutes after taking the medication. Do not take with milk products at the same time. Women may develop vaginal yeast infections while on this medication and should have medication on hand to treat this side effect. It may also interfere with oral contraceptives. Women should use an additional form of birth control while taking this. Doxycycline should not be given to children less than 8 years old or to pregnant women.

5. **Primaquine:** This will occasionally be prescribed to people who are going to areas where the most common malaria parasite is *Plasmodium vivax*. It may be given as prophylaxis, similar to the other medications discussed above, or it may be given to you upon your return after an extended stay (usually more than 4-6 months) in a malarious area. Details of dosing will be explained by your physician. Before you can receive this medication you will need a blood test to check for an enzyme called G6PD. If you lack this enzyme, you can not receive this medication.
Altitude Sickness

Who is at risk?
Altitude sickness, or acute mountain sickness, can occur at any altitude above 5,000 feet (1,600 meters) but is more likely to occur at altitudes above 12,000 feet (3,600 m). Rapid ascent to a high altitude (more than 2,000 feet in 24 hours) increases the likelihood of a person developing altitude sickness. All age groups are at risk of developing altitude sickness and those who have previously suffered from this problem are at great risk of developing this again.

What are the symptoms of altitude sickness?
Commonly encountered symptoms of acute mountain sickness include headache, loss of appetite, nausea, vomiting, difficulty sleeping, fatigue and shortness of breath especially with exertion. More severe forms of the disease include high altitude pulmonary edema, which is characterized by severe shortness of breath, cough, frothy sputum and blueness of the lips and fingernails (cyanosis). An additional complication is cerebral edema, which is manifested by severe headache, drowsiness, unsteady gait, unusual behavior and loss of consciousness with progression to coma.

How can mountain sickness be prevented or treated?
Gradual ascent to higher altitudes at rates of no more than 2,000 feet per day, if possible, is vital to the prevention of altitude sickness. Ideally, one should have a rest day for every 3,000 feet of altitude. Additional measures that may help decrease the possibility of becoming ill include the avoidance of over-exertion, eating multiple small meals rather than a few large meals, consuming a high carbohydrate diet, avoiding alcohol, and plenty of sleep. Acetazolamide (Diamox) at a dose of 125 to 250 mg, two times a day, has been shown to be useful in the prevention or treatment of symptoms of acute mountain sickness. Acetazolamide should be taken 24 hours before ascent and continued for 1-3 days depending on symptoms. Side effects include increased urination, a metallic taste, nausea, tiredness and a tingling discomfort in the arms and legs. Acetazolamide is a sulfa drug and therefore should be avoided in people with drug allergies. If you have a sulfa allergy, please ask your physician about other options for prevention. If the symptoms or signs of high altitude pulmonary or cerebral edema develop, the victim should be immediately evacuated to a lower altitude and, if possible, given oxygen.
Safe & Comfortable Air Travel

Modern aircraft are technologically advanced and comfortable. Still, many travelers dread taking flights. Ailments such as air sickness and swelling in the legs in addition to the inconvenience of sitting in a cramped position and eating bland food can combine to make the journey miserable for passengers.

A little preparation can go a long way in making your flight more enjoyable.

Air Sickness

Air sickness usually causes mild to moderate discomfort. Symptoms include dizziness, nausea, vomiting, pallor and cold sweats. In severe cases, it can be incapacitating.

To minimize your chances of becoming sick, sit in the middle of the plane near the wings. Because there is less movement of the plane in these areas, air sickness tends to be reduced. Travelers suffering air sickness are also advised to focus on distant objects (such as the horizon) and minimize head movements.

There are several groups of medications that can also help:

- **Scopolamine** is usually sold as a skin patch that is stuck behind the ear. It is effective for up to three days. Some people do not like this medication because it can cause drowsiness. It also requires attentive use: if you rub your eye while this medication is on your finger, it can cause your pupil to dilate for a day or longer. This dilation is harmless, but can alarm you and your doctor if you do not know what caused it.

- **Antihistamines** such as Dramamine (dimenhydrinate), Marezine (cyclizine) and Bonnie (meclazine) can be very helpful. Their side effects include drowsiness. Taken at the right time, these medications can help you sleep during the flight as well as prevent air sickness.

- **Maxalon and Maxaran** (metaclopramide) are also helpful.

You may need to test the drugs listed above to see which one is best for you. All of these medicines work better if taken before you become air sick.

Keep in mind that all medications have side effects. Consult your physician regarding which one you should take, especially if you have special medication conditions. People with gastrointestinal or bladder problems, liver or kidney disease, and people who are at risk of acute-angle glaucoma should seek medical advise before taking any of these medications.
Dry air
The air in the cabin of a plane is so dry that passengers can lose liters of fluid during a flight. Skin, especially lips, can become dry and itchy or irritated. Bring a moisturizer on board and apply often to hands, face and any other skin that feels dry. Consider using a lip balm as well. (check airline regulations first-many countries only allow liquid/gel items to be carried on if they are under a certain weight or volume).

Coffee, tea and alcohol can increase dehydration. Travelers should stick to drinking water and soft drinks.

Going up
The average jet cruises at about 35,000 to 40,000 feet. At that altitude, the air pressure in the cabin is much lower than it is on the ground. In fact, the pressure is comparable to being at the top of an 8,000 foot mountain. During ascent, decreasing air pressure causes air in your body to expand. Reduced pressure and a lack of physical activity can cause legs to swell. Take a walk around the cabin to restore circulation and reduce swelling. Walking and drinking plenty of fluids are thought to reduce the changes of developing a DVT (deep venous thrombosis).

Going down
During descent, the cabin pressure will become higher than the pressure of the air trapped in your middle ear. Ear pain and damage can occur if you are unable to equalize the pressures. Wiggle your jaw or chew or suck on something to aid equalization of pressure. Yawning can also help. If these don’t work, try the Valsalva maneuver: pinch your nose closed, close your mouth and blow gently. Remember to do this often and before experiencing pain.

Reconsider flying if you have a serious head cold. You may not be able to equalize the pressure in your ears. If you develop severe ear pain while flying, ask the on board staff for help and see your doctor before flying again.
Deep Vein Thrombosis

There is ongoing concern among airplane travelers about “economy class syndrome”, the development of deep vein thrombosis (DVT) and possible associated complications during a flight.

What is DVT and why is it dangerous?
DVT is the development of a blood clot (thrombosis) in one of the large veins, most commonly in the leg or pelvis. The presence of a blood clot is not in itself life threatening but a complication of it can be. If a part of the blood clot breaks off, it can float through the blood stream to the heart and lungs. If it obstructs blood flow to the lungs (called pulmonary embolus) it can be fatal.

Are DVT’s new?
Although the public has only recently become concerned about DVT’s, they have occurred throughout human existence. Air travel related DVT was first recorded in 1954. The factors which can lead to clotting of blood in the veins were first described by the famous pathologist, Virchow, in the 19th century. He noted that there was an increased tendency for the blood to clot within a vein when the blood flow was stopped (or significantly slowed), when a blood vessel had a damaged internal wall, or when the composition of blood was altered by illness or other factors.

Who is at risk?
Among the general public, the risk of developing a DVT that becomes a pulmonary embolus is about 1 in 35,000. Travelers who have conditions that slow the blood flow in the veins and/or increases the tendency of the blood to clot face an increased risk of developing a DVT. For example, people who are bedridden after an illness, injury or operation have slowed blood flow and are at increased risk.

Increased coaguability of the blood is also a factor. This risk factor can be higher among smokers and people with a current illness or malignancy, past history of DVT, family history of DVT. Certain medications, such as oral contraceptives, may also increased coaguability.

While people with one of the above risk factors are more likely to develop DVT’s, anyone can develop one.

Does air travel contribute?
DVT’s are mainly caused by slow blood flow in the legs and pelvis. This results from a prolonged period of uninterrupted sitting and can happen to passengers in a car as well as a plane.
**What are the symptoms of DVT and pulmonary embolus?**

Often, DVT in the legs cause no symptoms. If symptoms are present, they usually consist of pain and hardening in the calf muscle and swelling of the leg. If a pulmonary embolus occurs, the individual may notice sharp, localized chest pain and sudden, unexpected shortness of breath. Recent studies suggest that if travel-related pulmonary embolus is going to occur, it usually develops within two weeks of travel. The risk is greater among passengers traveling more than 10,000 km.

**Preventive measures**

Some airlines have in-flight videos/information on preventing DVT’s. All airline passengers should attempt to keep blood flowing in the legs as normally as possible by moving and stretching the legs frequently, every 30 minutes or so. Passengers should also change position in the seat often and stand and walk around the aircraft at regular intervals.

Graduated pressure support stockings have been shown to decrease the incidence of DVT in hospitalized patients and may be of assistance in preventing DVT in people seated for prolonged periods. As there are no significant side-effects from using these stockings, they are worth considering. However, it is important to obtain stockings that fit correctly and are applied from the lower leg to the thigh.

Aspirin in a small dose is advocated by some people. Although aspirin has been shown to prevent blood clots in arteries, as of yet there is no scientific evidence showing that aspirin prevents DVT’s. Check with your doctor before taking aspirin as it can have side effects.

The scientific evidence regarding the effects of dehydration on DVT formation is unclear. Nevertheless, you should stay hydrated by drinking a glass of water every one to two hours while flying. Additionally, limit alcohol consumption which also causes dehydration.

People at increased risk, especially those who have previous had a DVT, should seek medical advice when planning a trip. They may be prescribed anti-coagulation therapy to be use before, during and after the flight.

**Should you be afraid of “Economy Class Syndrome”**

Flight-related DVT and pulmonary embolism can occur, though simple measures can greatly reduce the risk. Talk to your health care provider if you think you may be in a higher risk group.
Traveling with Children

Traveling with children can be a challenging experience. The novelty of new circumstances and places may lead to major disruptions in their usual sleeping and eating patterns and behaviors. Here are some suggestions to make the trip a little easier and safer for both you and your child.

Air Travel: The change in air pressure during takeoff and landing can lead to discomfort in the ears of small children. Older children should be instructed to swallow, yawn, or chew gum. They can also pinch their nostrils together and try to push air out through the nostrils. Feeding an infant during takeoff and landing may help. If your child has had a recent ear infection, it is probably safe for him or her to fly when they are under treatment, no longer have ear pain and no longer have frontal headaches or sinus discomfort. If there is any question at all, you should always discuss with the child’s pediatrician.

Infants should be fed regularly (about every hour) on long flights to prevent dehydration. Toys, books and games can make the flight easier. Remember to bring formula (if appropriate), drinks, snacks and enough diapers to get you though any unanticipated delays.

Road Travel: Driving in many developing countries can be very dangerous as a result of poor road and automobile conditions, a lack of travel regulations and unsafe driving practices of local drivers. If you plan to drive, learn the local rules of the road. Automobile rental agencies in many foreign countries do NOT have car seats so be sure to take along a car seat for any infants and toddlers. Have your children ride in the back seat and speak up if your driver is driving too fast or too recklessly.

Food and Water Safety: Precautions for children are essentially the same as for adults who travel and are described earlier in this packet. Tap water, ice cubes should be avoided. Bottled water only should be used for drinking, for mixing formula and for brushing their teeth. Locally acquired milk and dairy products may not be pasteurized. Milk may be boiled if you are unsure. Only eat cooked vegetables and fruits that can be peeled. Practice good handwashing and bring along hand sanitizer (e.g. Purell).

Traveler’s Diarrhea: If your child develops diarrhea, the most important thing is to prevent dehydration. Consider bringing along pedialyte or oral rehydration salts. These should be available at most pharmacies. Juice and soda have a lot of sugar but not enough electrolytes and can worsen dehydration. Anti-motility drugs like Imodium and Lomotil are not recommended for children. Children’s Pepto-Bismol or similar products may be given as directed. Ask your pediatrician for additional recommendations. We will give you a prescription for an antibiotic (azithromycin) to treat diarrhea. Dosing will be determined based on your child’s weight. Ciprofloxacin, Levofloxacin and similar agents should not be used in children less than 18 years of age. If your child develops bloody diarrhea, high fevers or severe dehydration they must be seen by a physician.
**Immunizations:** Your child should be up to date on all of their childhood immunizations including Polio, Tetanus, MMR, Hepatitis B, Varicella. Hepatitis A, Typhoid, Meningitis, Yellow Fever, Japanese Encephalitis may be given depending on your destination, the duration of travel and the nature of the trip you are going on.

**Malaria and Mosquito Bite Prevention:** As discussed earlier in this packet, personal protective measures are extremely important to prevent bug bites that carry malaria and other diseases such as yellow fever, dengue and Japanese encephalitis. Long sleeves, long pants, a bug spray with DEET (20-30%) or picaridin (>19%) are essential. Avoid applying bug spray directly around the mouth or on the hands of younger children as they may accidentally get it in their eyes or mouth. Sleeping under mosquito netting is essential if you will not be in a screened or air conditioned room. Place netting over baby carriages as well. The various anti-malarial medications available for children will be discussed with you at your travel visit.

**Rabies:** Stray dogs, monkeys and bats in many countries may be carriers of rabies. Your child should be cautioned to avoid petting any dogs no matter how friendly they may appear. If your trip involves extended periods of time in rural areas, then it may be beneficial to your child to receive the pre-exposure rabies vaccine series as discussed earlier in this packet.

**Sunscreen:** You should apply sunscreen with SPF 30 or greater to your child’s skin. It should be reapplied frequently especially after swimming or sweating. They should wear hats and sunglasses to protect them as well.

**Medical First Aid Kit:** Consider taking the following along with you: oral re-hydration packets or solutions, acetaminophen (Tylenol), cough and/or cold remedies, Band-Aids, a thermometer, sunscreen, antiseptic solution, bug spray, diaper rash creams, antihistamines and any other medications the child regularly or frequently takes.

**Medical Care Abroad:** Check your insurance plan to be sure it will cover your child abroad and to see if it covers the cost of return travel home in the event of major illness. Consider purchasing additional travel insurance if it does not (see the last page of this packet).

**Swimming:** Neither you or your child should swim in any fresh water bodies such as rivers, ponds or lakes, particularly in Asia and Africa. The water may harbor parasites. Swimming in well treated pools and the ocean is safe.
Other Resources …

**Information:**
**CDC International Health Requirements and Recommendations:** authoritative general information by region. [www.cdc.gov/travel](http://www.cdc.gov/travel)

**International Travel and Health:** vaccination requirements and health advice from the World Health Organization. [www.who.int/ith](http://www.who.int/ith)

**IAMAT:** International Association for Medical Assistance to Travelers. Provides a booklet with names and numbers of English speaking physicians listed geographically. 716-754-4883. [www.iamat.org](http://www.iamat.org)

[www.mdtravelhealth.com](http://www.mdtravelhealth.com)

**Travel Supplies:**
**Travel Medicine, Inc.:** International Travel Health Guide. 800-872-8633. [www.travmed.com](http://www.travmed.com). Supplies (permethrin, water purification, etc) available online or by phone.

**Eastern Mountain Sports:** carries clothing, shoes, equipment and supplies for outdoor recreation and adventure travel. Multiple locations. [www.ems.com](http://www.ems.com).

**REI:** carries clothing, shoes, equipment and supplies for outdoor recreation and adventure travel. Multiple locations. [www.rei.com](http://www.rei.com).

**Insurance:**
Evacuation Insurance: most medical insurance or travel insurance does not cover evacuation/repatriation in the event of a medical emergency. You might consider purchasing this additional coverage for your trip. Various vendors are available: [www.globalrescue.com](http://www.globalrescue.com)
[www.internationalsos.com](http://www.internationalsos.com)
[www.medjetassistance.com](http://www.medjetassistance.com)
[www.tenweb.com](http://www.tenweb.com)