



VACCINES (“shots”) for Travel

How do I know which vaccines I should get before I travel?

You should visit a travel clinic, or your regular clinic, and they can help you decide which vaccines are indicated for your travel. It is best if you go at least one month before travel but if you need to go closer to your travel it is still better than not going at all. There is also a website (<http://www.cdc.gov/travel/>) that can give you an idea of the vaccines and medicine you will need. Make sure you **bring any vaccine records** you have with you to the clinic.

How does the doctor/nurse decide which vaccines they recommend to me?

There are benefits, risks and costs to all vaccines. Your doctor or nurse will recommend a vaccine when the benefit of the vaccine (how likely it will prevent you from becoming ill) outweighs the risks and cost of the vaccine. You should ask questions you have about each vaccine to your doctor or nurse.

What are the vaccines that my doctor/nurse may discuss with me?

There are 2 groups of vaccines. Those that are routine vaccines, that you should have whether or not you travel, and those you only need to get if you travel internationally.

Routine or regular vaccines

There are several vaccines that are considered routine that your doctor or nurse may recommend. Most of these you had as a child.

- You should have a ***Tetanus*** every 5-10 years.
- You should have had at least 2 ***measles*** vaccines at sometime in your life.
- You should have a ***polio*** booster once as an adult after completing the primary series.
- If you are older than 65 years you should have a ***pneumonia*** (pneumococcal) vaccine.
- If you have never had the disease ***chickenpox***, or the vaccine, you should tell your doctor.
- Most children and teenagers should have had a ***hepatitis B*** series.

Travel Vaccines

Hepatitis A

Hepatitis A is a very common viral infection that people catch from food and water. If you were born in another country you may have had this disease as a child. When you are a young child this disease is not severe. If you get this disease as an adult you may become very ill and could even die. You can have your blood checked to see if you ever had this disease (ask your doctor/nurse for details).

If you had this disease as a child you cannot catch it again. If you do not know and don't get the blood test you should get the vaccine before you travel. Two doses more than 6 months apart provide optimal protection, lifetime protection. However, at least one dose preferably 4-6 weeks but even up to the week before travel, will protect most travelers. The second dose provides the long term protection. You only need one vaccine before you travel and that will protect you during your trip. You should get a second vaccine 6-12 months after the first and then you are protected for the rest of your life.

Typhoid



Typhoid is another disease that usually comes from contaminated food or water. It usually causes very high fevers and pain in the stomach area. It can become very serious and cause death. **If you are traveling to visit your friends and family in your country of origin you are the most likely kind of traveler to get this disease.** There is a pill and a shot form of the vaccine. It takes 7 days to take all the pills and you need to finish these before you leave. The pill form is more complicated but lasts for 5 years before you need it again. The shot form is just one shot. The shot lasts for 2 years before you need it again.

Meningitis

Meningitis is an infection around the brain. There is a vaccine for the bacterial kind of meningitis that is especially common in some parts of Africa and if you are traveling to these areas your doctor/nurse will recommend this vaccine. It is also required by Saudi Arabia for entry, if you plan to attend the Hajj because this disease is very common in these settings. In other areas it might be indicated if you are staying with friends and family, especially if you will be there for a long-time. Ask your doctor or nurse how long before you need another.

Flu

The flu (influenza) causes fevers, cough, headaches, muscle aches and can cause serious illness even death. In North America it occurs in the winter but in the tropics it occurs year-round. It is very common in travelers. The flu strain causing illness changes every year. To be protected, you need the vaccine each year.

Rabies

Rabies is a very serious disease that most people from a dog bite or a bite from a bat. Many other animals, like monkeys, skunks and raccoons, can also cause this disease. If you are bitten by an animal while you are traveling you should scrub the bite wound for at least 5 minutes with soap and water and see a doctor as soon as possible after the bite so you can start a series of shots immediately. Getting the vaccine is very important, as everyone who develops rabies, dies from rabies. There is not any treatment once you get sick.

There is a vaccine for rabies to prevent the disease in case of a bite, but it is expensive and you need at least 3 weeks (3 separate shots). If you will be traveling for a long period you should consider getting these shots. Children are especially at risk of getting bit by dogs and not telling anyone about a bite. So, it is important to think of vaccinating children.

Yellow Fever

Yellow fever occurs in parts of Africa and South America. It causes very serious illness and usually death. This vaccine is frequently *required* with travel to certain areas or may be required if crossing between countries during travel. If you get this vaccine you will be given a “yellow card” that you should take with you to prove you got this vaccine. People get this disease by mosquito bites so mosquitoes should be avoided (see Malaria handout). This vaccine lasts for 10 years before you need another one.

Japanese Encephalitis

This disease is in Southeast Asia and South Asia. People get this disease from mosquitoes. If you are visiting areas outside major cities, particularly in rural areas where there are rice paddies and or pigs for more than a month your doctor/nurse may recommend this vaccine for you. You need at least three separate shots that must be started a few weeks before travel to be fully protected.



How to avoid Malaria and other diseases you might catch from insects

What is malaria?

Malaria is a disease that is transmitted by mosquitoes to humans when an infected mosquito bites a person. It usually causes high fevers, chills, headaches, and body aches. The parasite, once in the human body, travels to the liver through the blood. The person does not get sick until the malaria parasite comes out of the liver. The parasite can stay in the liver for a very long time but the worst type of malaria usually comes out of the liver within two weeks after the bite.

Why is malaria important?

There is *no vaccine* to protect you from malaria. Malaria commonly causes very serious disease and **DEATH**. People can die within 12 hours from the time they get their first symptoms. It is important to do all you can to prevent malaria which includes avoiding mosquito bites and taking a medicine while you travel and for a period after you return.

What if I had malaria in the past, am I protected?

People do become partially immune (protected) against malaria if they have had it many times in the past. However, the immunity (protection) wears off quickly, usually within a year or two of the last malaria episode. Therefore, you are **NOT PROTECTED** against getting malaria even if you have had it many times in the past.

How do I prevent mosquito bites?

There are many things you can do to prevent mosquito and other insect bites. This will not only protect you against malaria but may prevent other serious diseases like yellow fever, Japanese encephalitis, and Dengue fever. Mosquitoes that carry malaria generally bite from sunset until sunrise, but mosquitoes that bite during the day cause other diseases, so they are also best avoided.

Some simple things to avoid mosquito bites include:

- Wear *protective clothing* (long sleeve shirts and pants).
- Air-conditioning deters mosquitoes and windows that can be shut or at least with screens can help decrease the number of mosquito bites.
- Use a net over the bed (bednet) at night whenever possible. It is best if the bednet has been treated with chemicals (*ITN—insecticide treated bednet*). You can buy nets which have already been treated or you can treat your own with **permethrin**. There are also mosquito tents available that are more costly but are very convenient and can be bought in outdoor recreational stores or over the internet..

It is important to use mosquito repellants. The best mosquito repellant is *DEET* (N,N diethyl metatoluamide”). It is important to use products that have 25-50% DEET in them. These are widely available from most pharmacies, grocery stores, and convenience stores. There are many brands (i.e. Repel, Off, Cutters). Simply look on the side of the product under “Ingredients” to make sure it contains DEET and to find the correct



percentage. There are some DEET products available as a “slow-release” lotion (i.e. Ultrathon, Sawyer). These may contain less than 25% DEET but work well. DEET should be applied every 4-6 hours...and particularly before going to sleep. It is safe in kids and in pregnant women but you need to be careful not to get it into eyes or mouths. So, be careful not to put it on hands or near eyes of young children.

For the best protection you should ***treat your clothing with permethrin*** and use the DEET on your skin. Permethrin, the same chemical used on bednets, is safe and when clothes are properly treated, can last many weeks with one treatment. In the U.S. permethrin is available at outdoor recreation stores (i.e. REI Coop,) and can also be purchased over the internet. The best way to treat clothing is buying a formulation that you can prepare and dip your clothing in. If you have questions, ask your doctor or nurse to assist you. There are other repellants available but many do not protect as long or have as long a safety record as DEET.

Can I use DEET on the skin and Permethrin on the clothes of my kids?

Yes. DEET is safe for use on kids. Do not apply more often than instructed on the bottle. In small children do not place closed to eyes or on hands that they will place in their mouths. Isectacide treated bednets are very convenient with children and should be used around sleeping areas.

What medication should I take?

There are several medications available and you should discuss with your doctor or nurse which medication is best for you and your children. If you are going to an area with malaria it is ***extremely important*** that you, and your children, ***take a medication*** and take it as directed. Remember that you ***must complete the medicine*** as directed, which frequently a month after leaving the malaria area. Make sure you understand how to take the medicine before leaving the doctor/nurses office.

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Things to remember while you Travel (Carry with your travel documents):

Use Bednets, mosquito repellent and take your medicine as directed.

If you are diagnosed with malaria while traveling, you may take the treatment prescribed but **continue to take the medicine** given to you to prevent malaria.

If you develop a fever after return, even up to year after return, be sure to tell your doctor that you visited an area with malaria and suggest that you be tested for malaria.



How to prevent and treat Diarrhea while you are traveling

Why might I get diarrhea while I am traveling?

There are many infections people can get while traveling that cause diarrhea. Many of these infections do not affect the people living in the areas that you are traveling since they may have had them before (and are immune). People also get diarrhea while traveling from the stress of traveling and changing their diet.

If I am visiting a country I grew up in am I protected from getting diarrhea?

No. There are some infections you may have had as a child that you will not get again even if you are exposed to them. However, most of the infections that cause diarrhea do not produce long-term protection—so you can get them again when you visit.

How do I know if my diarrhea is from infection or from other reasons?

It can be difficult to tell the difference. If you are having just two or three loose stools a day and no other symptoms, your diarrhea is more likely not caused by an infection. If you are having many watery stools it is likely caused by infection. Having other symptoms with the diarrhea such as blood in the stool, fever, stomach pain, or nausea make infection very likely.

How do I avoid getting diarrhea?

The most important and easy thing to do to prevent diarrhea is frequent hand washing. This is especially important before eating meals, but the more often you wash your hands the better. Since soap and water are not always available, the alcohol-based hand sanitizers are very convenient (and work very well). You can buy these at any pharmacy, grocery, or convenience store in the United States--take them along with you. If you don't know how to find these ask your doctor or nurse.

Certain foods are more likely to be safe. Any food or drink that is very hot when it is served is safe. Breads and sweets are considered safe. Foods that are more likely to make you sick are uncooked vegetables, salads, and any raw or undercooked seafood, meats or fish. If you wash your hands and use a clean knife to peel and cut fruit it is usually safe. Avoid fruits that do not have a peeling, such as berries. Dairy products, such as milk and cheese are not safe unless they are treated (such as pasteurizing). You can make your raw milk safe by heating it until it starts to boil and letting it cool down. Boxed milk (irradiated milk) is safe to drink.

Water can make you ill as well. Like milk, if you boil your water that will make it safe to drink. Bottled water is also usually safe. Bottled, carbonated beverages (ones with bubbles such as soda) are safe to drink. Carbonation kills germs over a four hour period, so carbonating it at the "tap" does not make it safe if the water mixed in was



contaminated. You should avoid ice cubes, unless made with safe water and should brush teeth with safe water.

It may help you to more gracefully avoid certain foods if you tell your host that your doctor told you not to eat certain foods because “your stomach is not used to” these foods anymore.

What do I do if I get diarrhea?

There are two types of medicine for diarrhea in travelers. First, there are medicines that slow down the diarrhea but don’t treat the infection causing it. These medicines help decrease the symptoms. The most commonly used are loperamide (“Imodium”) and Bismuth subsalicylate (“Pepto-bismol”), which are both available without a prescription at any pharmacy. These should not be used in young children.

Also, there are antibiotics to cure the infection. These which decrease the number of days you are sick.

When diarrhea is very minor (two or three loose stools a day) it is probably not infectious and using either loperamide or Bismuth subsalicylate to help with the symptoms is usually enough. The doses and directions are below.

When you have lots of watery stools you should use the antibiotic that your doctor or nurse will give you to take on your trip. You can also use the loperamide and Bismuth subsalicylate for symptoms until the antibiotic works. If you are severely ill, have fever or have blood in the stool you should only use the antibiotic and NOT the loperamide or Bismuth subsalicylate.

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Things to remember while you Travel (Carry with your travel documents)

Don’t Get Diarrhea.

WASH HANDS, you cannot wash them enough, especially before eating (substitute alcohol based hand sanitizers like Purell or Aavanguard if more convenient).

Foods to avoid: Raw or undercooked meats, seafood, and fish; untreated milk or cheese; lettuce and raw vegetables. Fruits should be prepared in a clean manner.

Water and milk can be made safe to drink by bringing to a boil and letting cool down. Commercially bottle drinks are usually safe.

If you have one or two loose stools a day use only medicines to help with symptoms, if lots of watery stools, especially with blood in the stools, pain, or fever, take an antibiotic.

MEDICATIONS For diarrhea

To help with symptoms:



loperamide (“Imodium”)

Directions: Take two tablets to start, then take one pill after each stool (do not take more than 8 in 24 hours). Don’t use this medicine in babies, young children or when you are pregnant.

Bismuth subsalicylate (“Pepto-bismol”)

Directions: If using tablets take two tablets every 30 minutes until diarrhea decreases. Do not take more than 16 tablets in 24 hours. If taking liquid, take 6 teaspoons (30 mls) every 30 minutes until diarrhea decreases. Do not take more than 8 times during 24 hours. Do not use in babies and young children.

To treat an infection:

Antibiotic: Your doctor or nurse will give you an antibiotic to take with you that you can take if you get bad diarrhea. Make sure you understand how to use this before leaving the office. The names of some common antibiotics are Azithromycin (Zithromax), Ciprofloxacin, Levofloxacin (Levoquin), and Rifaxamin.