

# STAYING HEALTHY IN HAITI



EXEMPTION STATEMENT

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THIS VOLUME SUPERSEDES ALL PREVIOUS EDITIONS

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## How to Stay Alive



- \* Take your malaria pills
- \* Use insect repellent
- \* DO NOT drink untreated water
- \* Wash your hands
- \* Report illness quickly
- \* Say NO to sex
- \* BE CAREFUL, THINK SAFETY

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**U.S. ARMY MEDCOM (PROV)**

**U.S. ARMY MEDICAL RESEARCH & MATERIEL  
COMMAND (PROV)**

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**The Biggest Risks  
to U.S. Personnel****How to Avoid Those Risks****INJURIES**

Can kill or hurt you.

Safety first. Be alert and be cautious.

**LOCAL WATER**

Is highly contaminated with life-threatening germs that cause stomach cramps and severe diarrhea.

Do NOT drink or use untreated water or ice. Always wash your hands before eating and after using the latrine.

**LOCAL FOOD**

Can cause serious illness and may contain parasites.

Do NOT eat local foods. Eat only U.S. military-approved foods.

**MALARIA**

Is a killer!

Take malaria pills as prescribed before, during, and after deployment.

**INSECTS**

Transmit life-threatening diseases in this part of the world.

Use DEET repellent on exposed skin. Treat bed nets and clothing with permethrin spray. Sleep under a bed net.

**HIV (AIDS)**

Will kill you slowly; you get it through sex, contaminated needles, and blood.

Avoid sex. Saying "no" will save your life. Wear gloves when handling blood or body fluids.

**HUMAN BODY FLUIDS AND WASTE**

Can spread hepatitis and other diseases.

Wear gloves when handling blood, body fluids, or feces.

**ANIMALS**

May transmit rabies and other life-threatening diseases to humans.

Avoid contact with all animals. If bitten or scratched, seek medical attention immediately.

**RIVERS, LAKES**

May contain parasites that penetrate unprotected skin and cause serious illness.

Do NOT swim or bathe in ponds, streams, rivers, or lakes. If you must wade in fresh water, avoid direct contact between your skin and the water, if possible.

## The Healthy U.S. Soldier, Sailor, Airman or Marine in Haiti

Is alert and cautious

Seeks medical attention early

Takes malaria pills as directed

Eats only approved foods

Uses DEET insect  
repellent on exposed skin

Drinks only treated water and  
lots of it to avoid dehydration

Treats uniform with  
permethrin insect repellent

Wears sleeves rolled down

Washes hands before eating  
and after using the latrine

Wears gloves when handling  
blood, body fluids, feces

Uses appropriate latrine  
facilities

Says no to sex

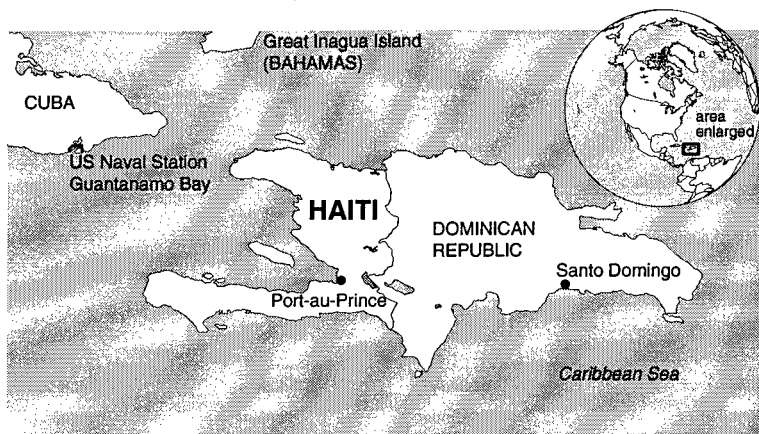
Tucks trousers into boots

Never wades in rivers or  
lakes with skin exposed

Never goes barefoot

**For more detailed guidance on field sanitation,  
see Army Field Manual 21-10.**

## Map of the Area



Countries in the tropics have a high concentration of serious diseases. Visitors who do not take precautions will become sick. Nearly all of the health problems that are discussed in this booklet can be prevented if the following simple measures are frequently and forcefully emphasized. Preventing disease and promoting safety are indicators of good soldier discipline.

### Specific Information on the Medical Threat and Prevention

The following information is given as general health advice. Individual service recommendations may be more specific.

### Safety

*Accidental injuries* can disable or kill soldiers quickly. Heavy machinery and equipment, loaded weapons, nighttime air traffic, and motor vehicles are all opportunities for disaster if safety is not constantly emphasized.

You may experience jet lag during your first week in country. Jet lag occurs because the normal bodily rhythms are disrupted by changes in time zones. Fatigue, irritability, headache, reduced efficiency, and early morning wakefulness occur after landing. Exhaustion and impaired judgement may be present. These symptoms usually go away within a week.

The situation in this area is unpredictable. Soldiers need to stay alert and be cautious while deployed.

#### **OTHER SAFETY TIPS**

In warm weather, petroleum products stored in cans must be vented. This prevents expansion of the container and explosions that cause significant injuries.

Containers used for potable (drinkable) water should be labeled "potable water." They should be used for storing only potable water. Never use containers that have had petroleum products in them for storing drinking water.

Grain (drinking) alcohol from nonapproved sources is often tainted with wood alcohol or other substances that can cause kidney failure, blindness, and other problems. Never consume alcohol from nonapproved sources.

### **Infectious Diseases**

During almost all military activities, including war, large numbers of soldiers are affected by disease. Often disease will cause more casualties than bullets. Why? War and other disasters disrupt sanitation and displace large numbers of people.

This is particularly true in Haiti, so be especially careful. *Practice disease prevention and report immediately to medical personnel if you feel ill.* What you believe to be diarrhea or the flu may be a serious illness that needs immediate attention. Recently in Somalia, the great majority of U.S. military personnel remained healthy by preventing disease and getting medical help early. Still, many became ill because they did not take their malaria pills correctly or follow other preventive guidance.

The following are the diseases most likely to affect U.S. personnel in Haiti.

#### **1. DIARRHEA AND OTHER INTESTINAL PROBLEMS**

*This is the problem most likely to affect deploying personnel, if precautions are not taken.* Diarrhea can be caused by bacteria (cholera, salmonella, shigella, ETEC, campylobacter), viruses (hepatitis A, hepatitis E), protozoa (agents that cause amoebiasis, giardiasis, cryptosporidiosis), worms (ingested as worm eggs), or toxins (food poisoning). People usually get infected by consuming food or

beverages contaminated by microscopic amounts of feces. Usually there is no way to tell whether a particular meal or drink is contaminated by looking at it or smelling it. Diarrhea can lead to severe dehydration.

Other symptoms of intestinal illness include stomach cramps, nausea, and vomiting. Diseases like typhoid fever and shigellosis can cause very high fevers. People who are sick may be contagious and should seek medical care, for themselves and to prevent other people from becoming ill.

### **Prevention**

Treat all water for the proper amount of time before use unless it is carbonated, recently boiled, or known to be adequately purified by iodination or chlorination. Keep storage containers covered or capped and guarded. Use bottled water *only* if the seal is unbroken.

Do not use ice cubes unless their source and handling is known to be safe.

Eat only U.S.-military-approved foods. Although foods provided by natives may be intended as gifts, their safety to military personnel is doubtful. Meat, eggs, milk products, and uncooked vegetables are particularly dangerous. Fruits are safe if you can peel them.

Only go to the bathroom in constructed latrines or other areas prepared for proper burial or destruction of wastes. Wash your hands after each use of the latrine and before eating.

Every unit should have its own field sanitation team made up of personnel from the unit itself. For further guidance on field sanitation see Army Regulation 40-5 and Field Manual 21-10.

## **2. MALARIA**

This is one of the most important subjects. **MALARIA CAN KILL!**

Malaria is transmitted by mosquitoes. The type of malaria in this region is the most dangerous and is called falciparum malaria. Malaria pills should be taken on time during and after deployment, exactly as directed, to prevent malaria.

Most soldiers do not have experience with personal protection against disease-carrying insects in this part of the world. Still, our experience in Somalia shows that *with careful prevention* and use of insect repellents, the vast majority of military personnel will return home safe and healthy.

### **Prevention**

Take a chloroquine tablet every week. Taking it on the same day each week will help you remember—taking medicines on time can be life-saving.

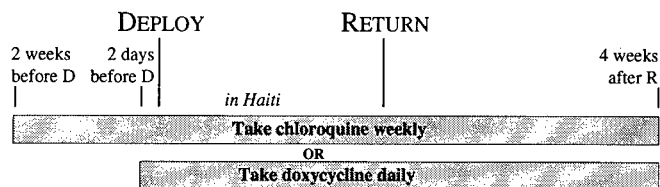


Some unit surgeons may recommend taking doxycycline instead of chloroquine. This is an acceptable alternative. If you are taking doxycycline (which is on a once-a-day schedule), do *not* miss a day. If you forget to take one tablet, you cannot make up for it by taking two the next day. Women must avoid becoming pregnant while taking doxycycline.

Soldiers should continue to take their malaria medicine for 4 weeks after returning from the Caribbean. (See below)

#### Timeline for Taking Malaria Medicines

(D stands for deploy, R stands for return)



Some soldiers have reported stomach upset when they take either chloroquine or doxycycline. These soldiers found that taking the pills with a whole glass of water or food worked well in preventing stomach upset. Some people may find that chloroquine makes them dizzy or affects their sleep. Usually these symptoms go away on their own. If you believe you are having side effects to the medication or have an allergic reaction to the medicine, seek medical advice as soon as possible. Stopping the medicine on your own significantly increases your chances of getting malaria.

*Taking malaria pills will not provide 100% protection against malaria.*

You must also use repellents and bed nets to help prevent mosquitoes from biting you and transmitting malaria. Proper use of repellents and bed nets and proper wearing of the uniform will also protect you from many other insect-borne diseases.

Army-issue DEET insect repellent lotion for skin (NSN 6840-01-284-3982), in the green tube, is to be applied as a thin layer to all exposed parts of the body. This includes ears, face, and neck. Avoid getting it into your eyes or mouth.

Another way to prevent diseases carried by insects is to wear the BDU with the sleeves rolled down and the pant legs tucked into boots. It is best to treat uniforms with the chemical permethrin, which stops insects from biting. Permethrin, also known as Permanone, should never be used on skin. It comes in two forms; the first is permethrin insect-repellent spray in the yellow can (NSN 6840-01-278-1336). This should be sprayed on the outside of the uniform until it

looks wet. Allow the uniform to dry completely before putting it on. Your uniform is now insect-proof for six washings or six weeks, whichever comes first. At that time, you must repeat the process to safeguard yourself against disease. Always follow the label instructions on the can. The second method, the IDAA kit (NSN 6840-01-345-0237), is now available. It involves soaking one uniform in a permethrin solution inside a plastic bag. Uniforms treated this way are good for 25 washings.

Bed nets should be sprayed thoroughly with permethrin for added protection. For best results, this should be repeated every two weeks. Make sure that bed nets completely surround the bed and are tucked in under the bed or sleeping bag so that insects cannot enter. All of these products are safe and effective when used correctly.

### **3. DENGUE**

Besides malaria, mosquitoes in this area transmit other serious diseases, such as dengue (breakbone) fever. People with dengue fever may become very sick; symptoms usually include fever, headache, pain behind the eyes, rash, and muscle aches. Personnel should report any illness with fever.

#### **Prevention**

Prevention of all insect-borne disease requires proper wearing of the uniform, use of Army-issue DEET repellent, and use of bed nets. Applying permethrin to uniforms and bed nets provides additional protection. The specific recommendations are identical to those used for malaria prevention. These measures also prevent other illnesses carried by insects, such as viral encephalitis.

### **4. DISEASES TRANSMITTED IN WATER AND SOIL**

Several kinds of parasite in water and soil can penetrate human skin directly. Schistosomiasis is known to be a problem in the Dominican Republic and may be introduced into Haiti. It is a disease that occurs in humans when the larval form of the parasite, which grows in freshwater snails, burrows through the skin of bathers. After entering the skin, larvae migrate to the person's intestines and are expelled with feces. When the feces of infected persons reach fresh water, the eggs are taken up by the snails, where they mature and are then ready to infect another person.

Leptospirosis, also known as mud fever, is obtained by consuming or contacting water contaminated with infected animal urine.

Other parasites with complicated life cycles, such as hookworm, penetrate human skin from soil or grass contaminated with feces.

#### **Prevention**

Avoid swimming, wading, or bathing in bodies of water. If you must wade, make sure that you wear BDUs and boots (rubber boots would be ideal) or other impervious materials to avoid direct contact with the water. Also avoid going barefoot or lying directly on the ground.

### **5. DISEASES TRANSMITTED BY ANIMALS**

Rabies is common in animals in Haiti, including mongooses, dogs, and livestock. Rabies is transmitted directly by the animal through a bite or scratch.

Wild and domestic animals can transmit other diseases to humans either by direct contact, by releasing particular germs or parasites into the water and soil, or by being consumed as food. The germs that cause brucellosis, also known as undulant fever, are found in inadequately cooked meat and unpasteurized milk, cheese, and other dairy products. Tapeworms and other parasites may also be present in meat and cannot be detected by most individuals. Anthrax can occasionally be obtained through contact with animals in the area.

#### **Prevention**

Disease transmission from animals can best be prevented by avoiding animals whenever possible, avoiding their areas of habitat or burrows and not adopting "pets." When animals must be handled, use rubber or latex gloves. If an animal bites or scratches you, seek medical attention as soon as possible.

### **6. DISEASES TRANSMITTED BY HUMAN BLOOD OR BODY FLUIDS**

#### ***Sexually Transmitted Diseases***

Acquired Immunodeficiency Syndrome (AIDS) is very common in this part of the world, especially in prostitutes. Getting AIDS will kill you! It has been estimated that 37-69% of Haitian prostitutes are infected with HIV (human immunodeficiency virus, the cause of AIDS). Other very common sexually transmitted diseases include gonorrhea and other forms of urethritis or "drip," syphilis, chancroid, warts, herpes, and hepatitis B.

### **Prevention**

Abstaining from sexual contact will completely prevent sexually transmitted diseases. In this part of the world, not having sex may save your life.

### ***Other Diseases Transmitted by Blood or Body Fluids***

HIV is the virus most known to Americans for being transmitted by blood or body fluids. Viral hepatitis, particularly types B and C, are also transmitted this way and even more easily than HIV. Hepatitis is an infection of the liver, and its symptoms, which last 1 to 3 weeks, include fever, intestinal discomfort, diarrhea, and jaundice (yellow skin). Many infected people will continue to carry the virus long after they recover and can pass hepatitis on to others, usually through sexual or blood contact.

### **Prevention**

The same precautions doctors and nurses use for handling blood and body fluids will also work successfully for you. Avoid contact with another person's blood or body fluids when possible. If this is not possible, wear latex or rubber gloves to handle this material.

Avoid tattoo parlors and needles (other than used by U.S. medical personnel) and avoid sharing toothbrushes, shaving items, or eating and drinking utensils. Handle sharp objects with care. If you are accidentally cut or stuck with a contaminated needle or other sharp object, immediately wash the area with clean water and report for medical care.

The hepatitis B vaccine is very effective. All health care workers and mortuary affairs specialists should have received the three-shot series. Others who are at high risk of infection, for example because of sexual contacts, should receive the vaccine.

## **7. RESPIRATORY DISEASE**

Respiratory diseases can be highly contagious, particularly in crowded conditions. Some diseases can be transmitted rapidly by the respiratory route, such as influenza, colds, and sore throats. Others, like tuberculosis (TB), can slowly progress so that you may not be aware of them until months or years after the initial contact. In Haiti, tuberculosis is very common among the local people.

Meningococcal disease is also spread by the respiratory route. Tiny droplets from the nose or throat of infected persons contain the bacteria that can be transferred to uninfected persons. These bacteria can be carried by the bloodstream throughout the body, causing a severe infection. It can also produce meningitis by infecting the lining that normally protects the brain and spinal cord.

## **Prevention**

All personnel should receive the annual influenza vaccine; this reduces the number of people who get sick with the flu. Transmission of other respiratory diseases is hard to prevent but can be reduced if individuals avoid coughing or sneezing on others. Sleeping head to toe with roommates is more effective than sleeping head to head in preventing the spread of respiratory illnesses.

At the time of deployment, soldiers should have the results of a TB skin test (PPD) recorded on their medical records within the last year and get re-tested at least 3 months after leaving Haiti.

## **Stress**

Everyone is subject to stress and reacts to it. Stress can affect us physically and mentally, thereby affecting individual and unit performance. Managing stress effectively can promote success. However, prolonged stress or very stressful events may erode our ability to cope. Intense events, such as involvement with dead, dying, or suffering people, are among those situations that soldiers may find most challenging. Even the most tough or seemingly stable among us may be deeply affected by these types of events. Others may seem to manage them more easily. Home problems, troubled relationships, economic strain, general uncertainty, and other concerns may affect most of us sometimes and may contribute to overall stress during deployment. Stresses do not replace each other—they add to one another.

Individual stress can be managed effectively. It is important to personally identify those situations that are most stressful. The care, concern, and interest of leaders and other unit members is a powerful tool for lessening the effects of stress. Discuss the issues you are most concerned about with someone you trust, such as a friend, chaplain, or medic. Communications by phone or letter with those who are important to you back home can help resolve lingering worries. Find positive ways of relieving or balancing stress, such as through sports, games, or hobbies. Achieving some moments of relative privacy and taking advantage of opportunities for morale, welfare, and recreation can be valuable for some individuals. Even a moderate change in daily routine can help relieve stress and boost one's ability to cope.

High amounts of stress can also sometimes undermine unit cohesion and contribute to tension, misconduct, lowered performance, and even substance abuse. The sources of stress and problems related to them must be addressed. Debriefing and command sensing sessions are excellent opportunities for leaders and soldiers to talk with each other and to develop closer working relationships.

Personnel need to have a clear understanding of their unit's mission. In the case of a challenging humanitarian mission, soldiers may cope best if they feel that their participation makes a meaningful difference.

No two soldiers or units will manage stress in the exact same manner. However, it is important to take an active role in managing stress in ways that best serve you and your unit.

## **Climate**

Except in the mountains where the temperature is moderate, Haiti can get hot, especially in the summer when temperatures may reach the 90s. The two rainy seasons are April through June and September through November. Tropical storms and hurricanes may occur from mid-July through October.

### **Prevention**

Avoid dehydration and heat injuries. Be alert to drink more fluids when the weather is warm or hot. Reduce problems related to sun exposure by using sunglasses, sunscreen (SPF 15 or higher), and lip protection.

Cold temperatures can occur in the higher elevations, particularly at night, so extra warm, dry clothing may be important. Never sleep inside a closed vehicle or tent while a heater is on without making sure that there is adequate ventilation.

## **Hazardous Creatures**

Centipedes, scorpions, and brown recluse spiders are found in Haiti. Poisonous snakes are not a problem in this area.

### **Prevention**

Avoid venomous insects. Stings need to be reported immediately to medical personnel because they can be rapidly fatal. Military personnel with a known allergy to bee stings should carry a bee sting kit. Personnel should not go barefoot, sleep directly on the ground, or put their hands or feet in crevices or holes. Keeping animals as pets is prohibited.

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## **Personal Hygiene**

Maintaining personal hygiene is the mark of a professional soldier and will prevent many skin problems that can become serious. Good hygiene includes frequent hand-washing, proper dental care, the maintenance of clean, dry clothing, and bathing in approved, safe water as often as is practical. If a shower is not available, sites of perspiration should be washed with a wash cloth daily. Socks should be changed as frequently as possible. Foot powder may help prevent fungal infections.

## Immunizations

Immune globulin	It should be given to all those deployed; prevents hepatitis A.
Tetanus / Diphtheria vaccine	A booster is recommended every 10 years; every 5 years when treating for a "dirty" wound to prevent tetanus.
Influenza vaccine	Required annually; normally given 1 Oct through 31 Mar.
Typhoid vaccine	A booster is required if more than 3 years (for the shot) or 5 years (for the oral vaccine) since the last dose.
Yellow fever vaccine	A booster is required if more than 10 years since last dose. There is no known yellow fever in Haiti today, but it has been reported in the Caribbean in the past.
Hepatitis B vaccine	All health care workers must receive this 3-shot series. Others at high risk of infection are encouraged to receive it as well.
Rabies vaccine	Animal handlers and Special Forces personnel should receive the pre-exposure rabies vaccination series.
Measles & Rubella vaccine	A one-time booster is recommended for soldiers born after 1956. They are currently given during basic training.
Polio vaccine	A one-time adult booster is recommended for soldiers, which is usually given during basic training.

### Not recommended:

Cholera vaccine	The licensed cholera vaccine is not very effective, requires a prolonged series of shots, has bothersome side effects, and interferes with yellow fever immunization.
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Note: Information in this booklet is given as general health advice. Individual service recommendations may be more specific. Different services may have different HIV testing requirements, may give hepatitis B vaccine to all deploying personnel, or may give a meningococcal vaccine "booster" shot.



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## **Prophylaxis**

### **MALARIA**

Soldiers should take a chloroquine (500 mg) tablet once a week while in Haiti and should continue taking it for 4 weeks after leaving the Caribbean.

[For the alternative regimen, one doxycycline (100 mg) capsule should be taken once a day. Women must avoid becoming pregnant while taking doxycycline.]

### **TUBERCULOSIS**

Soldiers should receive a skin test (PPD) for tuberculosis before deploying and 3 months after returning to CONUS. The pre-deployment test is not necessary if a skin test result has been documented in the last 12 months.

Soldiers who are pregnant or immunodeficient should contact medical personnel as soon as possible. Immunodeficiency can be caused by some types of medicines, certain medical conditions, or by having had your spleen removed.

## **Reproductive Health Issues**

Pregnant soldiers should not deploy to Haiti. Certain vaccinations given during predeployment processing (measles, mumps & rubella, yellow fever, oral typhoid) are not recommended during pregnancy. Any soldier who believes she may be pregnant should have a pregnancy test before preparation for deployment.

Soldiers should not have sexual intercourse during the deployment. Any soldier in Haiti who believes she has become pregnant should seek medical care as soon as possible so a pregnancy test can be performed.

For prevention of malaria, most soldiers will be taking chloroquine, which does not have any harmful effects on the fetus when used in recommended doses. However, doxycycline, the alternative medicine for malaria, should not be used during pregnancy because it may affect teeth and bone development in the fetus. In Haiti, diseases caused by insect bites are a significant threat to the health of all soldiers. Thus, proper use of personal protective measures (PPMs) to prevent insect bites is an important part of staying healthy. The US military's insect repellents, 33% DEET (on the skin) and permethrin (on BDUs and bednets), are not known to be risky to pregnant women or to developing fetuses when used as directed. As is always the case in military operations, other insect repellents may be required for preventive measures. You should know the health risks involved and protect yourself accordingly.

All personnel should minimize exposure to hazardous materials and use appropriate protective measures when handling them.

Map of Haiti and the Surrounding Area

