

Medical and Psychological Preparation for Deployment to Haiti

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Discussion Topics

1. Public Health Concerns
2. Before Individuals Depart for Haiti
3. What to Bring to Haiti
4. While in Haiti
5. Psychological Preparedness

Less Than Nothing

The Event and The Context

Morbidity and Mortality Associated with Disasters

1. Injuries
2. Emotional psychological stress
3. Epidemics of disease
4. Increase in indigenous disease

Public Health Issues and Priorities for the Haiti Earthquake

Two Earthquake Disaster Myths

1. Dead bodies rarely spread disease
2. Earthquakes rarely trigger major epidemics

Sources of Ill Health

- ***Insect borne Diseases***
 - Malaria
 - Dengue
- ***Blood borne Diseases***
 - HIV
 - Hepatitis B
- ***Respiratory Diseases***
 - Influenza
 - Tuberculosis
- ***Food borne, water borne***
 - Hepatitis A
 - Diarrheal Diseases
- ***Lack of basic sanitation***
 - Parasites
 - Unsafe structures and debris

Insect Borne Diseases: Malaria

Malaria occurs in all parts of Haiti. Ways to prevent malaria include the following:

- Taking a prescription antimalarial drug such as Atovaquone/proguanil (Malarone), chloroquine, doxycycline, or mefloquine
- Using insect repellent and wearing long pants and sleeves to prevent mosquito bites
- Sleeping in air-conditioned or well-screened rooms or using bed nets

No antimalarial drug is 100% protective, so it is important to use all three ways to prevent malaria.

Malaria is always a serious disease and may be a deadly illness.

If you become ill with a fever or flu-like illness either while in Haiti or after you return home (for up to 1 year), you should seek immediate medical attention and should tell the doctor that you have recently been in Haiti.

Insect Borne Diseases: Dengue

Dengue is a common infection in Haiti and is transmitted to people by the bite of an infected mosquito. Some important information to know about dengue as you travel to Haiti:

- No vaccine or medications are available to prevent dengue.
- The best way to reduce your risk of dengue is to protect yourself from mosquito bites.
- The mosquitoes that spread dengue usually bite at dusk and dawn but may bite at any time during the day.
- Symptoms and signs are high fever, chills, headache and muscle pain. Additionally, a faint rash on the trunk and upper arms may appear on the second to third day of illness.
- There are no specific medicines to treat dengue, so treatment is supportive with fever-reducing medicines and fluids.
- You can help control mosquito populations by draining all standing water that you find in open containers left outdoors.
- If you are in the Dominican Republic awaiting entry into Haiti, be aware that dengue is also common there.

Insects

Insect-borne diseases such as malaria and dengue are risks in Haiti. Prevent insect bites by:

- Using insect repellent (bug spray) that contains one of the following active ingredients: DEET, picaridin (KBR 3023), Oil of Lemon Eucalyptus/PMD, or IR3535. Always follow the instructions on the label when you use the repellent.
- Wear lightweight long-sleeved shirts, long pants, and a hat outdoors.
- Remain indoors in a screened area or using insect repellent frequently on uncovered skin during the peak biting period for malaria (dusk and dawn) and dengue (any time of day).
- Sleep in beds covered by a bed net (preferably treated with permethrin), if not sleeping in an air-conditioned or well-screened room.
- Spray rooms with products effective against flying insects, such as those containing pyrethroid.

Food and Water Borne Diseases

Hepatitis A or immune globin (IG)	<ul style="list-style-type: none"> • Even if your departure is imminent, one dose of hepatitis A vaccine provides adequate short-term protection for healthy people. • For long term protection, a second dose is required 6–18 months after the first dose, depending on the brand of vaccine used.
Diarrheal Diseases	<ul style="list-style-type: none"> • Salmonella • Viruses • Parasites • Cholera

Lack of basic sanitation: Safe Food and Drink

Wash your hands often with soap and clean water or use an alcohol-based hand cleaner. Make sure you clean your hands before you eat or prepare food. Other considerations while in Haiti include:

- Eat foods that are packaged or that are freshly cooked and served hot.
- Do not eat raw and undercooked meats and seafood or unpeeled fruits and vegetables.
- Drink only bottled, boiled, or chemically treated water and bottled or canned carbonated beverages.
- Avoid tap water, fountain drinks, and ice cubes.
- To disinfect your own water: boil for 1 minute or filter the water and add 2 drops of household bleach or ½ an iodine tablet per liter of water.
- Use bottled, boiled, or chemically treated water to wash dishes, brush your teeth, wash and prepare food, or make ice.

Respiratory Diseases - Crowding

Influenza	<ul style="list-style-type: none"> •Seasonal H₁N₁
Tuberculosis	<p>Rates of tuberculosis are very high in Haiti.</p> <ul style="list-style-type: none"> •If you anticipate giving medical care to or working closely with ill or injured victims or other displaced persons in Haiti, a tuberculin skin test (TST) is recommended before travel and then 8–10 weeks after return. •If you are in contact with known TB patients or persons suspected of having TB, use a personal respiratory protective device, such as a N-95 respirator. •Regardless of TST results, any person who develops symptoms of TB during or after deployment should see a doctor immediately.

Blood Borne Diseases

<p>HIV</p>	<p>Haiti has a high prevalence of HIV infection. Healthcare workers should take the following precautions:</p> <ul style="list-style-type: none"> •Wear gloves for touching blood and body fluids, mucous membranes, or broken skin and for handling items or surfaces soiled with blood or body fluids. •Use masks, protective eyewear/face shields, gowns or aprons to prevent exposure during procedures that are likely to generate droplets of blood or body fluids.
<p>Hepatitis B</p>	<ul style="list-style-type: none"> • If departure is imminent, the first in a 3-dose series (day 0, 1 month and 6 months) may provide some protection. • An accelerated dosing schedule may be used (doses at days 0, 7, and at 21–30 days with a booster at 12 months).

Before Individuals Depart for Haiti: Other Infectious Diseases (cont.)

Anthrax

Anthrax occurs in Haiti and is primarily transmitted by direct contact with infected animals or with contaminated products from infected animals.

- Cutaneous (skin) anthrax infection usually begins as a small sore that develops into a blister. The blister then develops into a skin ulcer with a black area in the center. The sore, blister, and ulcer do not hurt.
- The first symptoms of inhalation anthrax are like cold or flu symptoms and can include a sore throat, mild fever ($>100^{\circ}$ F), and muscle aches. Later symptoms include cough, chest discomfort, shortness of breath, tiredness, and muscle aches.

If you develop any of these symptoms, see a healthcare provider immediately.

While in Haiti: Animals – Rabies?

Direct contact with animals can spread diseases like rabies or cause serious injury or illness. Displaced animals may revert to the wild and go about in packs. They will also be hungry and may be searching for food and may be more likely to bite. It is important to prevent animal bites and scratches.

- Stay away from all animals, including dogs and cats. Even animals that look like healthy pets can have rabies or other diseases.
- If you are bitten or scratched, wash the wound well with soap and clean water and **seek medical care right away**. If you have a povidone-iodine solution (such as Betadine), use that to clean the wound after washing it.
- Resist the urge to rescue animals with the intent to bring them home to the United States. Dogs and cats may be infected with rabies but not show signs until several days or weeks after you first encounter them.
- After you return from Haiti, be sure to tell your doctor or state health department if you were bitten or scratched during travel.

Unsafe Structures and Debris

The risk of injury after an earthquake is high. Hazards such as electrocution from downed power lines and structural damage to buildings and roads all pose a risk. Accidents and violence are documented risks for humanitarian workers and cause more deaths than disease and natural causes. According to the World Health Organization, injuries are among the leading causes of preventable death in travelers.

- The majority of roads in Haiti are not paved. Haiti is predominately mountainous and has extensive deforestation and soil erosion, making travel over roadways especially hazardous. Exercise extreme care when traveling on roads particularly in rural areas.
- There has been extensive structural damage to buildings in Haiti. Avoid unstable structures if possible.
- Other potential hazards to be aware of include standing water from water system breaks, natural gas leaks, airborne smoke and dust, hazardous materials such as ammonia or leaking fuels, exposure to germs from sewer line breaks, and exposed wiring.
- Use personal protection equipment, such as hard hats and steel-toed boots, if in areas with damaged buildings.

Criminal Activity/Violence

Desperate, shell-shocked and frightened people

Before Individuals Depart for Haiti: Recommended Vaccines

Routine	<ul style="list-style-type: none"> • Be sure that you are up to date on vaccines such as measles/mumps/rubella (MMR), diphtheria/pertussis/tetanus (DPT), polio, seasonal and H1N1 flu, and varicella. • Especially important to have a current tetanus shot.
Typhoid	<p>2 vaccines available for typhoid prevention:</p> <ul style="list-style-type: none"> •Injectable vaccine may be preferable to the oral vaccine in cases where travel is imminent. •Oral vaccine requires refrigeration and 4 tablets taken every other day over one week.
Hepatitis A and B	
T.S.T.	

While in Haiti: Exposure to Human Remains

Human remains may contain blood-borne viruses and diarrhea-causing bacteria. Relief workers who are handling remains should take precautions to avoid being exposed to these organisms.

- Protect your face from splashes of body fluids and fecal material by using a plastic face shield or a combination of eye protection and surgical mask. In extreme situations, a cloth tied over the nose and mouth can be used to block splashes.
- Protect your hands from direct contact with body fluids and from injuries that break the skin by using a combination of a cut-proof inner layer glove and a latex (or similar) outer layer.
- Wash your hands with soap and water or with an alcohol-based hand cleaner immediately after you remove the gloves.
- Protect your feet and ankles against sharp debris by wearing foot wear that covers the entire foot and has thick soles.
- Give prompt care—including immediate cleansing with soap and water, and a tetanus booster if indicated—to anyone who is injured during work with human remains.

Items to Bring to Haiti

There will be almost no infrastructure support available in Haiti for the immediate future. Relief workers and volunteers should prepare to be self-sufficient. Items to bring along include:

- Food and water sufficient for the length of your stay
- Soap and an alcohol-based hand cleaner (containing at least 60% alcohol)
- Insect protection: insect repellent and a bed net
- Medications: antimalarial pills, medications for the treatment of travelers' diarrhea, personal prescriptions (including extras), any preferred over-the-counter medications, and copies of all your prescriptions
- An extra set of prescription eyeglasses and/or contacts

- Water purification tablets (iodine or chlorine), bleach, or a water purifier
- Persons with pre-existing health conditions should consider wearing an alert-bracelet and make sure this information is on a contact card in your wallet or travel documents
- Personal protective equipment (PPE): safety glasses or goggles, work boots, leather gloves for physical labor, rubber gloves for handling blood or body fluids, surgical masks, hard hat, ear plugs, N-95 respirators for those who are fit-tested

Additional items to bring to Haiti

Due to severe damage to health facilities and shortages of medical supplies, carry a first aid kit for your own protection. Minimum suggested contents include:

- Bandages (roller, adhesive, triangular)
- Sterile gauze pads
- Disposable gloves
- Scissors
- Tweezers
- Cold compress
- Antiseptic wipes
- Antibiotic ointment
- Hydrocortisone ointment
- Commercial suture/syringe kits to be used by a local health-care provider. These items will require a letter from the prescribing physician on letterhead stationery. Pack these items in checked baggage, since they may be considered sharp objects and confiscated by airport or airline security if packed in carry-on bags.

Expect Common Reactions To A Disaster

You too are only human!

Haiti Travel Warning

- There are reports of extensive damage, and communications remain extremely difficult. Additional aftershocks remain a possibility. A Tsunami Watch for Haiti and neighboring islands issued by the Pacific Tsunami Alert Center has expired.
- U.S. citizens in Haiti should remain in shelter.
- If exposed when an aftershock hits, take steps to avoid falling debris by getting to as open a space as possible, away from walls, windows, buildings and other structures.
- If indoors, take shelter under a heavy table or desk, or in a doorway. Avoid damaged buildings, and obey all instructions from local authorities. Do not use matches, lighters, candles or other flame in case of disrupted gas lines. Avoid downed power lines.

Psychological Preparation

For External Events to be Stressful They Must Be:

- Meaningful
- Potentially challenging or threatening
- Must threaten our sense of our own ability to cope

Critical Incident Stress

The natural reaction of a normal person to an extremely abnormal situation. It may manifest itself as a physical, cognitive, and/or emotional response that may be experienced almost immediately or may be delayed days, weeks, or months.

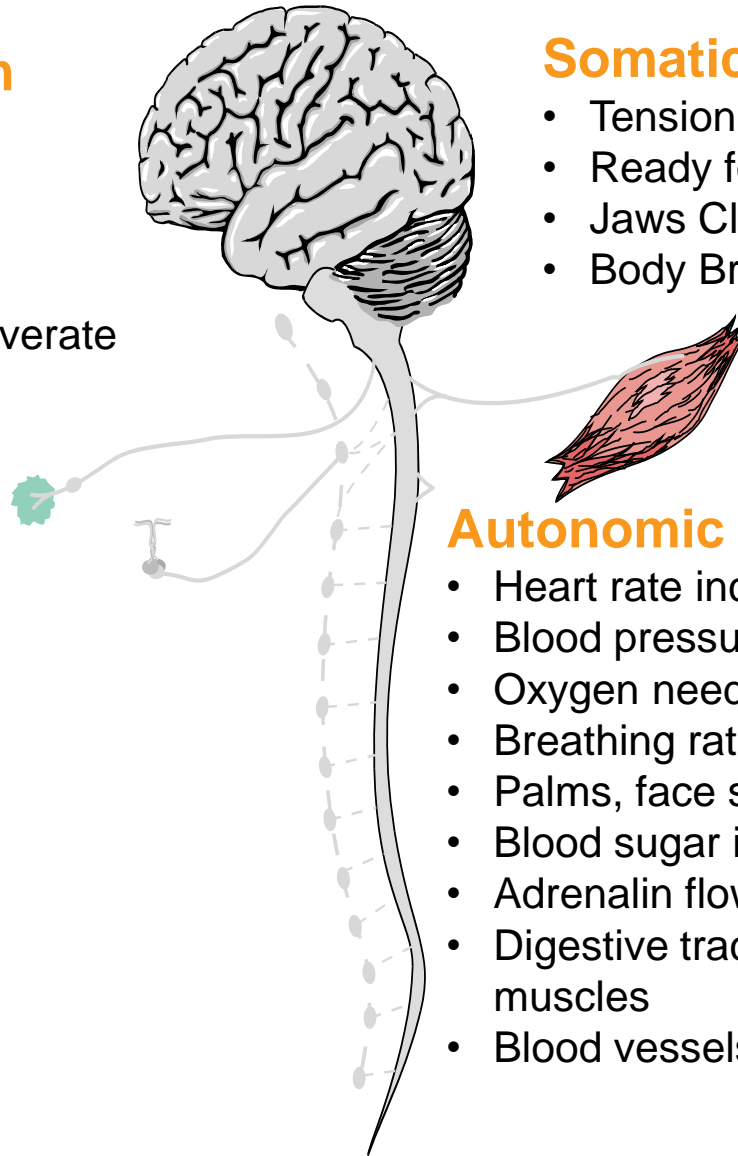
Critical Incident Stress

The essence of the problem in critical incident stress is the ***reverberations*** and ***adjustments*** of our mind and body to the intensity of feelings experienced.

How Fear Affects the Whole Body

Central Nervous System

- Perception - Narrowed
- Memory - Coarse, Imprecise
- Learning - Blocked
- Conditioning - Defense
- Tendency - Regress or Perseverate
- Expectancies - Negative
- Tone - Flee or Destroy



Somatic Motor System

- Tension
- Ready for Action
- Jaws Clench
- Body Braces for Action

Autonomic Nervous System

- Heart rate increases
- Blood pressure increases
- Oxygen need increases
- Breathing rate increases
- Palms, face sweat
- Blood sugar increases
- Adrenalin flows
- Digestive tract shuts down blood to muscles
- Blood vessels constrict in hands, face

Types of CIS Reactions

Epictetus*

“Men are disturbed not by things, but the views which they take of them”

- Epictetus*

*5th Century Greco-Roman philosopher

Physical Symptoms of Stress

- Fatigue
- Muscle tremors
- Sweating/chills
- Difficulty breathing
- Gastrointestinal disturbance
- Dizziness
- Nausea/vomiting
- Appetite disturbance
- Sleep disturbance
- Sexual dysfunction
- Thirst
- Fainting
- Twitches
- Weakness
- Chest pain
- Headaches
- Elevated BP
- Rapid heart rate
- Shock symptoms
- Grinding of teeth
- Visual difficulties
- Profuse sweating

Cognitive Symptoms of Stress

- Memory impairment
- Anomia (word loss)
- Difficulty with decisions
- Mental confusion
- Intrusive thoughts/visions
- Nightmares
- Hypervigilance
- Suspiciousness
- Intrusive images
- Blaming someone
- Poor problem solving
- Intrusive thoughts/visions
- Poor abstract thinking
- Uncertainty
- Poor attention/decisions
- Poor concentration
- Disorientation
- Difficulty identifying objects or people
- Heightened or lowered alertness
- Increased or decreased awareness of surroundings

Emotional Responses to Stress

- Anxiety/Fear
- Depression
- Irritability
- Grief
- Remoteness/numbness
- Guilt
- Panic
- Denial
- Agitation
- Intense anger
- Apprehension
- Emotional shock
- Emotional outbursts
- Feeling overwhelmed
- Loss of emotional control
- Inappropriate emotional response

Behavioral Responses to Stress

- Withdrawal
- Antisocial acts
- Inability to rest
- Intensified pacing
- Erratic movements
- Change in social activity
- Change in speech patterns
- Loss or increase in appetite
- Hyperalert to environment
- Increased alcohol consumption
- Change in usual communications

Mitigating the Impact of Critical Stress

- Do not judge your reactions
- Use relaxation technique to cool down
- Breathe thru events
- Stay hydrated
- Do not isolate yourself when feeling down or upset
- **Connect with others who understand**
- Take breaks from high stress events
- Stay ahead of overwhelming, smells, sights and sounds
- Remove yourself from unnecessary exposure to toxic scenes as much as possible

Mitigating the Impact of Critical Stress (cont.)

- Stay away from alcohol as a tool to cope or sleep
- Find a buddy-watch out for each other and notice changes in your or their personality
- If you think someone is having a hard time err on the side of approaching them, rather than not.
- If you don't know what to say, say "how are you doing?" and be prepared to listen.
- Do not make any major life decisions or philosophize about the meaning of life, existence,
- Help others by `normalizing symptoms`
- Help reduce guilt "Its not your fault"
- Identify resources

Techniques Used to Elicit the Relaxation Response

- Meditation
- Diaphragmatic Breathing
- Imagery/Visualization
- Stretching
- Progressive Muscles Relaxation

The Relaxation Response

*Relaxation
Response*



*Deep State
of Rest*

Decreases:

- Heart Rate
- Blood Pressure
- Breathing Rate
- Metabolic Rate

Allows the Body to:

- Return to normal
- Recuperate from harmful effects of stress
- Regain its natural ability to cope with additional stress

The Basic Elements for Eliciting the Relaxation Response

- A quiet environment is not required
- A comfortable position is not needed
- A mental attitude adjustment is critical
- A repetition of a simple word, phrase, image or prayer will do.