Safety Guidelines for Fieldwork

I. General Field Safety Guidelines

Fieldwork is an important part of teaching, research, and clinical practice at UCSB. This booklet is intended to help you prepare for health and safety problems you might encounter when fieldwork takes you off camp

local residents and authorities, such as stat

Contact Corporate Risk Management at (919) 62-4246 or visit them at
http://finance.UGa.edu/insurance/depts/index.php to obtain information about travel insurance and waivers.

II. Physical and Environmental Hazards

Many general physical and environmental hazards exist in nearly every location worldwide. All field team members, regardless of the work location, should read through table 1 to learn more about some general and physical and environmental hazards. If your work is in North America, please read table 2. If your work will take you out of North America, please read table 3 about international hazards.

Table 1 Physical and Environmental Hazards Found Worldwide

Hazard	Location	Cause	Symptoms	First Aid	Prevention
Dehydration	Worldwide	Not enough water intake	Dark urine Lethargy Constipation Light-headedness	Drink plenty of fluids, take frequent rest breaks, and minimize intake of beverages containing caffeine.	Drink plenty of water (at least 2 quarts of water per day). Drink more if working strenuously or in a warm climate
Impure Water	Worldwide	Harmful organisms and pathogens living in ñnaturalò water sources	Gastrointestinal illness Flu-like symptoms	Drink clear liquids. Slowly introduce mild foods, such as rice, toast, crackers, bananas, or applesauce. See a doctor if there is no improvement.	Carry your own water. Treat water before use with tablets, purifiers, or by boiling for more than 3 minutes.
Sunburn	Worldwide	Excessive exposure to the sun	Irritated skin, pink or red in color	Apply cool water, aloe, or other cooling lotion to affected area.	Wear long sleeved clothing and a hat. Apply sun protection factor (SPF) of 30.
Heat Exhaustion	Worldwide: hot climates	Prolonged physical exertion in a hot environment	Fatigue Excessive thirst Heavy sweating Cool and clammy skin	Cool the victim, treat for shock, and slowly give water or electrolyte replacer.	Acclimate to heat gradually. Drink plenty of liquids. Take frequent rest breaks.
Heat Stroke	Worldwide: hot climates	Prolonged physical exertion in a hot environment	Exhaustion Light -headedness Bright red skin which is warm to the touch	Cool the victim at once, replenish fluids, and seek medical attention immediately.	Acclimate to heat gradually. Drink plenty of liquids. Take frequent rest breaks.
Frostbite	Worldwide: cold climates	Exposure to cold temperatures	Waxy, whitish numb skin Swelling, itching, burning, and deep pain as the skin warms	Slowly warm the affected areas (do NOT rub area) and seek medical attention as soon as possible.	Dress in layers. Cover your extremities with warm hats, face mask, gloves, socks, and shoes.

Hazard	Location	Cause	Symptoms	First Aid	Prevention
Travel-related accidents	Worldwide	Injury associated with vehicle, boat, aircraft, or other means of travel	Physical injury and/or death	Perform CPR if needed. Seek medical attention as soon as possible.	Be familiar with safe operation of the vehicle or craft you will operate; use licensed pilots or drivers.

III. Animals and Pests

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Dangerous animals and other pests are present worldwide. General safety rules can help protect you from these hazards. All field researchers, regardless of the work location, should read through table 4 for some general guidelines to avoid unwanted animals and pests. If your research is in North America, please also read table 5. If your research will take you out of North America, please also read table 6 about international animals.

A number of animals and pests may be encountered in fieldwork. Follow these general guidelines to prevent close encounters of the painful kind:

- Keep garbage in rodent-proof containers and stored away from your campsite or work area. Food crumbs and debris may attract insects and animals.
- Thoroughly shake all clothing and bedding before use.
- Do not camp or sleep near obvious animal nests or burrows.
- Carefully look for pests before placing your hands, feet, or body in areas where pï6 bo ¾

Table 4 Animals and Pests Found Worldwide

Type	Location	Most Dangerous Species	Defensive Action	First Aid	Prevention
Sharks	Worldwide: Shores of oceans, including the U.S., Africa, Central and South America, Australia, and the Pacific Islands	Great White, Bull, Tiger, Oceanic Whitetip	Call for help; swim towards safety. Punch or kick the shark if necessary.	Seek medical attention for serious injuries or wounds.	Never swim alone. Donôt wear sparkling jewelry. Donôt enter the water when bleeding.
Crocodiles and Alligators	Worldwide: Tropics and subtropics of North America, Australia, Eastern China, and Africa	American Alligator (North America), Estuarine Crocodile (Australia), Nile Crocodile (Africa)	Do not provoke an alligator or crocodile.	Seek medical attention for serious injuries or wounds.	Avoid waters known to be home to crocodiles or alligators. Keep at least 30 feet away from any crocodile or alligator.
Rodents	Worldwide	Refer to Section IV: Diseases	Wear appropriate personal protective equipment (gloves) if you must touch a rodent.	Clean wounds thoroughly if bitten or scratched.	Keep areas clean to avoid attracting rodents. Keep food stored in sealed containers.

Type	Location	Most Dangerous Species	Defensive Action	First Aid	Prevention

Table 5 Animals and Pests Found in North America

Type	Location	Most Dangerous Species	Defensive Action	First Aid	Prevention
Bears					

Type	Location	Most Dangerous Species	

Type	Location	Most Dangerous Species	Defensive Action	First Aid	Prevention
Spiders	Worldwide	Funnel Web and Redback Spiders (Australia); Brazilian Wandering Spider, Brown Recluse, and Tarantula (South America)	Do not pick up or disturb a spider.	Clean wound and put a cool pack on the area. Keep area immobilized at heart level. Take victim to hospital (alert them first). Kill spider for positive ID (if possible).	Use care around rock piles, logs, bark, outdoor privies, and old buildings. Shake out clothing and bedding before use.
Scorpions	Worldwide, especially North Africa, the Middle East, South America, and India	All	Avoid contact with scorpions whenever possible.	Clean wound and put a cool pack on the area. Keep area immobilized at heart level. Use painkiller or antihistamine if desired. Take victim to hospital if he or she shows no signs of improvement.	Always shake out clothing and bedding before us. Avoid lumber piles and old tree stumps.

IV. Diseases

Viruses, bacteria, fungi, and parasites cause diseases in nearly every location worldwide. Some diseases, which are carried or transmitted by an animal, are known as ñvector-borneò diseases. Where appropriate, the scientific name of the disease organism, or vector, is included in italics in tables 7 and 8.

This guide is not intended to cover every health risk in every location, but it provides information about some common diseases. Always check with your health care provider before travelling out of the country to learn about specific health risks for the region in which you will conduct your research.

All field researchers, regardless of the work location, should read through table 7 to learn more about some general diseases that exist worldwide. If your research is in North America, please also read table 8. If your research will take you out of North America, also read table 9.

Table 7 Diseases Found Worldwide

Type	Location	Exposure Route	Symptoms

Type	Location	Exposure Route	Symptoms	First Aid	Prevention
Foodborne Diseases: Salmonella	Worldwide	Beef, poultry, milk, eggs, unwashed raw vegetables	Diarrhea Gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Obtain a vaccine. Consult with your doctor at least 1 month prior to departure. Always cook food thoroughly. Wash vegetables before consuming.
Foodborne Diseases: Typhoid Fever (Vaccine Available)	Worldwide	Contaminated food and water	Diarrhea Gastrointestinal symptoms	Drink plenty of fluids. Seek medical attention if symptoms persist for longer than 3 days.	Obtain a vaccine. Always cook food thoroughly. Never drink water from an impure source.
Histoplasmosis	Worldwide (especially Mississippi and Ohio River Valleys)	Inhalation of fungus from soil contaminated with bat or bird droppings *Histoplasma capsulatum*	Mild flu-like symptoms Occasionally can turn into acute pulmonary histoplasmosis	See a doctor if you suspect histoplasmosis Typically clears up in 3 weeks.	Use caution when disturbing dry soils or w8(o)-17(u)6lears up

Table 8. Diseases Found in North America

Type	Location	Exposure Route	Symptoms	First Aid	Prevention
Coccidioidomycosis ñValley Feverò	North and South America: arid regions	Fungus is inhaled when soil is disturbed. Coccidioides	Flu-like symptoms Occasionally becomes severe lung disease	See a doctor if you suspect Valley Fever.	Use caution when in close contact with soil or dust and keep surfaces wet to reduce dust African Americans, Filipinos, and immuno-compromised are at greater risk than others.
Encephalitis	North and South America (St. Louis Encephalitis) and the U.S. (West Nile Virus)	Infection from bite of an infected mosquito	Mild: Fever and headache Severe: Headache, high fever, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, paralysis, and, very occasionally, death	Seek medical attention immediately if you suspect encephalitis.	Use repellents. Wear long pants and long sleeved shirts. Avoid being bit by mosquitoes. Avoid areas of standing water where mosquitoes breed.

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Type	Location	Exposure Route	Symptoms	First Aid	Prevention
Rocky Mountain Spotted Fever	United States, southern Canada, Mexico, and Central America	Infection through the bite of an infected tick *Rickettsia rickettsii*	Sudden onset of fever, headache, muscle pain, spotty rash	See a doctor if you suspect Rocky Mountain Spotted Fever.	Avoid tick-infested areas. Wear long pants and long sleeved shirts. Use a repellent. Check clothing and hair for ticks and remove any ticks.
Hantavirus Pulmonary Syndrome (HPS)/ Sin Nombre Virus	North America	Inhalation of dusts or aerosols from the infected rodentôs feces, urine, or saliva Vector: Deer mouse (*Peromyscus maniculatus*)	Early (1 to 5 weeks): Fatigue, fever, muscle aches, and sometimes headaches, dizziness chills, and abdominal problems Late (4 to 10 days after early symptoms): Coughing, shortness of breath	Seek medical attention IMMEDIATELY if you suspect HPS. The likelihood of survival is greatly increased with early diagnosis and treatment.	Avoid contact with rodents, especially their feces. See below for details on how to clean and dispose of a rodent infected area.

Type	Location	Exposure Route	Symptoms	First Aid	Prevention
Schistomiasis	Brazil, Egypt, sub-Saharan Africa, southern China, the Philippines, and Southeast Asia	Transmitted by swimming in contaminated fresh water	Can be asymptomatic. Acute: (2 to 3 weeks) Fever, lack of appetite, weight loss, abdominal pain, weakness, headache joint and muscle pain, diarrhea, nausea, and cough Chronic: Disease in the lungs, liver, intestines, or bladder	See a doctor if you suspect schistomiasis.	Avoid freshwater wading or swimming in endemic regions. Heat bath water over 50°C for at least 5 minutes before use.

Other Diseases (Vector-Borne)

Many other vector-borne diseases may pose a problem when travelling out of the country. Always check with a physician to learn the specific threats in your location of study. Some other vector-borne diseases include:

A. African Sleeping Sickness: carried by the tsetse fly in Africa
B. Chagas Disease: transmitted by the Conenose bug in South America
C. Encephalitis: carried by mosquitoes in Asia and eastern Russia
D. Leishmaniasis: transmitted by sand flies in the tropics and subtropics
E. Filariasis: carried by mosquitoes in the tropics
F. Onchocerciasis causes ñriver blindnessò and is carried by black flies in Africa, Arabia, and Central and South America.

Other Diseases (General)

There are other diseases to be aware of when travelling outside the United States. While risk of infection is generally low, it is important to be aware of them and take appropriate precautions to guard against diseases such as tuberculosis, HIV/AIDS, SARS, and viral hemorrhagic fevers. Always check with your health care provider to learn more about specific diseases that exist in the region where you will be conducting your research.

Proper Rodent Handling

Steps can be taken to reduce the risk of rodent-borne diseases. Most important: Make the area unattractive to rodents. Cover or repair holes into a building to prevent unwanted rodents. If camping, keep the area clean of trash and store food carefully to prevent attracting rodents. Donôt camp near rodent burrows. Please refer to ñAnimals and Pests: Generalò for further tips on how to prevent rodent infestations.

If rodent feces or dead rodents are discovered, some precautions will help reduce the risk of exposure to rodent-borne diseases when cleaning the area:

Dead Rodent: Using gloves, spray the dead rodent with a solution of 1.5 cups bleach to 1 gallon of water.

Rodent Feces: Donôt sweep or vacuum rodent droppings. Spray the droppings first with a bleach solution (1.5 cups bleach to 1 gallon of water). Then wipe up the droppings with a wet mop the area with the bleach solution25.

V. Resources

Many available resources may provide more in-depth information regarding your research environment. Please use the references in this section for further information on topics discussed in this booklet.

On Campus

Environmental Safety Office Division (ESD) is available for hazard information and hazard evaluations. They can be reached at 706-542-5890 or online at _____.

The Industrial Hygiene and Occupational Safety office is available for information on workplace safety and personal protective equipment use.

Student Health is available for International travel consultations and vaccinations for students. They can be reached at 706-542-5575 or online at http://www.uhs.uga.edu/ or by email at lrachun@uhs.uga.edu

The Workers Compensation Office is available for questions about workersô compensation coverage and injury reports. They can be reached at 706-542-2222, or fax 706-542-7321, or e-mail *benefits@uga.edu*. or online at *http://www.hr.uga.edu/workplace-injuries-workers-comp*.

Off Campus

First Aid/CPR Training: First Aid and CPR training are available from a number of organizations, including the Central North Carolina Chapter of the Red Cross, located in Durham. They can be reached at 919-489-6541 or online at www.cncredcross.org.

General: The Centers for Disease Control and Prevention (CDC) offers a web site that describes many topics related to travel, both domestic and international: *http://www.cdc.gov/travel/*.

Medical Information about a variety of illnesses, including dehydration, carbon monoxide poisoning, sunburn, excessive heat, hypothermia, and high altitude sicknesses, can be found on *http://www.webmd.com*.

Diseases: The CDC offers more detailed information about many diseases on their web site at *http://www.cdc.gov/travel/diseases.htm*.

Weather:

Hunting Season: To get more information concerning hunting seasons and regulations, contact the U.S. Forest Service on-line at *http://www.fs.fed.us/*.

Lyme Disease: The American Lyme Disease Foundation provides information about the disease at *http://www.aldf.com/*.

Poisonous Plants: More information about poison plants, including photos, can be found at *http://poisonivy.aesir.com/*.

Giardia: Information on Giardia can be found at the CDC web site as well: http://www.cdc.gov/parasites/giardia/