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Advice for relief workers and other travellers to areas affected by natural disasters

Several natural disasters in 2009, including floods in Peru, Colombia, Indonesia and the United States, and an earthquake in Italy, have highlighted the importance of adequate preparation for travellers and relief workers visiting areas affected by natural disasters. Those planning to visit affected areas should be aware of possible hazards and the increased risk of injury and illnesses. The [Foreign and Commonwealth Office website](#) should always be consulted prior to planning travel to assess safety at the destination and whether there are any travel restrictions.

Details of natural disasters can be found on the [ReliefWeb website](#).

Food and water advice

Unsanitary living conditions, damage to sewage systems, flooding and limited supplies of clean drinking water, may increase the risk of [diarrhoeal illnesses](#). Reliable sources of bottled water may not be available and [water purification](#) may be necessary. Bringing water to a boil is the most reliable method, but this may not always be practical. Using iodine or chlorine preparations to purify water are usually effective, but protozoan parasites such as *Cryptosporidium* and *Giardia* are not always killed by these agents. In these cases combining iodine or chlorine treatment with filtration of water using a portable water filter that has a filter size of 0.2 µm to 1.0 µm should be performed.

Medications for self-treatment of diarrhoeal illness are available for travellers to take with them. These can include: oral rehydration preparations, an anti-motility agent such as loperamide, and in the absence of contraindications, a treatment course of ciprofloxacin (500mg twice daily for up to three days). Individuals with diarrhoea that is associated with fever or blood should seek prompt medical evaluation. Personal hygiene, including frequent hand-washing, is essential.

Vector-Borne diseases

Flooding and areas of standing water increase the risk for outbreaks of endemic mosquito borne diseases. Specific advice should be sought on the risk of diseases such as [malaria](#). Travellers to areas affected by natural disasters should take [insect bite avoidance](#) measures. Country specific malaria advice may be found in the [Health Protection Agency Advisory Committee on Malaria Prevention guidelines](#).

Vaccination advice

Travellers should be up-to-date with immunisations routinely administered in the UK, including [MMR](#).

Information on specific health risks, including recommended vaccinations, can be found on the [NaTHNaC Country Information Pages](#).



In addition, the following should be considered:

Tetanus: Tetanus is transmitted via wound contamination with the bacterium *Clostridium tetani*. A booster is recommended if not received within the past 10 years. In the United Kingdom, when a tetanus booster is recommended the trivalent tetanus, diphtheria and polio vaccine, is the vaccine of choice.

Hepatitis B: Hepatitis B is transmitted by contact with bodily fluids or blood. Those involved with patient care or contact with bodily fluids should be vaccinated.

Hepatitis A and **typhoid**: Hepatitis A and typhoid are both transmitted through contaminated food and water. Damage to sewage systems and contamination of local water supplies in endemic countries may increase the risk.

Cholera: Cholera is transmitted through contaminated food and water. Contamination of local water supplies may increase the risk. Vaccination may be recommended for humanitarian aid workers and travellers with limited access to safe water or medical care during an outbreak.

Other health risks

The risk of injury after a natural disaster is high. Hazards such as electrocutions from downed power lines, structural damage to buildings, roads and basic services all pose a risk. Dust inhalation, trauma and exposure to the environment with the risk of hypothermia are potential hazards.

Toxic industrial chemicals and hazardous waste may have been released during the devastation and may be a concern.

There may be severe damage to health facilities together with shortages of surgical supplies and medicines. Travellers should carry with them a personal first aid kit.

Particular care should be taken if wading in flood waters to reduce the chance of injury and secondary infections of any cuts in the skin with bacteria such as *Vibrio vulnificus*. The risk of *leptospirosis* should also be considered.

Snakes displaced from their natural environment may be encountered and should be avoided. If bitten seek medical attention urgently.

High temperatures in these areas may pose additional risks such as heat exhaustion and sunburn [1].

Risk from dead bodies

The infectious disease risk from handling dead bodies is low [2,3]. Workers should be psychologically prepared to work in such difficult situations. Support from fellow workers and family may be helpful.

General advice



Persons planning to visit affected areas should regularly consult the [Foreign and Commonwealth Office](#) for up-to-date security and safety advice.

Those wishing to assist in areas affected by natural disasters should contact appropriate aid and charity agencies for guidance on how best they can help. Travelling to an affected area independently and without adequate preparation may put a strain on the already challenged emergency and medical services in the area.

References:

1. US Centers for Disease Control and Prevention. Extreme Heat. [online resource]. <http://www.bt.cdc.gov/disasters/extremeheat>
2. Gottlieb S. Dead bodies do not pose health risk in natural disasters. Brit Med J. 2004; 328:1336. [Accessed 8 April 2009]. Available at www.bmj.com/cgi/content/full/328/7452/1336-b?etoc
3. Healing TD, Hoffman PN, Young SEJ. The infection hazard of human cadavers. CDR Review. 5:1-16, 1995. <http://www.hpa.org.uk/cdr/archives/CDRreview/1995/cdr0595.pdf>

Links:

[Centers for Disease Control and Prevention \(CDC\). Health recommendations for relief workers responding to disasters.](#)

[Centers for disease Control and Prevention \(CDC\). Natural Disasters.](#)

[Foreign and Commonwealth Office Travel Advice.](#)

[ReliefWeb latest natural disasters](#)

[World Health Organization Health Action in Crises.](#)

[World Health Organization Natural disaster profiles](#)