



BASIC MEDICAL TIPS FOR HANDLING DISEASE IN THE POST FLOOD SITUATION IN CHENNAI

The recent floods in Chennai opened up possibilities of a break-out of diseases due to stagnant water, lack of clean water and food and improper drainage. It is important to have a basic information of probable diseases and how common people can take necessary precautions. It is not practically possible for medical doctors and nurses to provide services in every locality and hence a document of this nature will facilitate all citizens and aid-workers to identify dangers and seek for an experts' assistance.



Timing of spread of disease

After any natural disaster, it usually takes 4 days to 4 weeks for the first waves of infectious diseases (air-borne, food-borne, and/or water-borne infections) to emerge.

After 4 weeks, the symptoms of victims who have contracted infections with long incubation periods or those with latent-type infections may become clinically apparent. During this period, infectious diseases that are already endemic in the area, as well as newly imported ones among the affected community, may grow into an **epidemic** (an **outbreak** of a disease or illness that spreads rapidly among individuals in an area or population at the same time).



Types of Diseases and common symptoms

1. Water and Food borne [spread through contaminated water and food]

- a. **Diarrhoea (Cholera, Dysentery)** - symptoms are abdominal (stomach) discomfort, nausea, vomiting, loose stools with or without fever.

Action to be taken - plenty of fluids, electrolyte powder -1 packet in 1 litre of water. If vomiting is severe and an intolerance to fluid persists the individual may need intravenous fluids and hospitalisation. Antibiotics will be needed in infective diarrhoeas.

- b. **Leptospirosis** (rat fever) - symptoms are high fever, chills, headache, muscle aches and body pains, vomiting, jaundice (yellow skin and eyes), red eyes, loose stools etc.

Action to be taken - need an experts' help and hospitalisation.

There is no role for routine use of Doxycycline to prevent Leptospirosis.

- c. **Hepatitis A&E** - low grade fever, jaundice (yellow discoloration of urine, eyes, skin).

Action to be taken - please consult your local doctor.

- d. **Typhoid** - symptoms are fever, abdominal pain, lethargy, sometimes loose stools.

Action to be taken - need a doctor's advice and antibiotics.

- e. **Worm infections** - symptoms especially in children include itchy bottom, decreased appetite for food, abdominal pain etc

Action to be taken – Albendazole (Zentel) 400 mg tablet to be taken once as a single dose.

Prevention

- **Safe drinking water is the only solution to prevent water-borne diseases.**
- **“Boil the water till roll boiling” for 15 - 20 minutes is the ultimate answer for water quality-WHO.**
- **Packaged bottled water from reliable sources is safe for consumption.**
- **If both are unavailable, chlorine tablets can be used to disinfect water.**
- **Chlorine tablets: A 50 gram tablet is used to purify 10,000 litres of water and a 5 gram for 1000 litres. The water has to stand for an hour before being used for drinking. Commercial preparation of Chlorine tablets may be available and please refer to instructions on the bottle .**
- **Hand washing** before preparing or eating food is a safe-guard for personal hygiene which protects self and others from several diseases.
Soap is sufficient or else alcohol based sanitiser that contains at least 60% alcohol.
You may refer to ‘**6 steps in hand washing**’ on the internet.



Food Hygiene

- Eat thoroughly cooked, hot and steaming foods.
- Avoid raw vegetables, salads and fruits that cannot be peeled and raw sea-food
- Avoid chutney and other items that are not properly cooked.
- Boil unpasteurised milk
- Avoid ice cubes unless prepared from boiled or packaged water.



2. Air-borne diseases (Droplet spread)

- a. **Acute Respiratory Infection (pneumonia / influenza)** - symptoms are fever, sore-throat, cough and sometimes breathing difficulty and rapid breathing, especially in infants and children.

Action to be taken - may need antibiotics and doctors advise if severe.



3. Skin infections

Fungal skin infections of the feet are common mainly due to walking in infected water.

Prevention- Avoid walking through flood water, especially if there are cuts or abrasions in the legs. When unavoidable, it is important to wash the legs with warm water and soap immediately after walking through the water.

Action to be taken if infected:

Whitfield ointment for local application.

Other antifungal ointments: Miconazole or Clotrimazole ointment.

Keep the feet dry always as far as possible.

Cleaning of houses and walls - detergent, bathroom cleaning solution (phenol, Lysol). May be good to use a face mask covering the nose if there is lot of dust.

Use of bleaching powder:

Bleaching powder can be used both for purifying water and for disinfection of places. For purifying drinking water, 4 grams can be put in 1000 litres and water made to stand for an hour. (Chlorine tablets are better than bleaching powder for drinking water)

For disinfecting rooms or surroundings, Bleaching powder and Lime in the ratio of 1:4 can be used. (Lime is cheaper than Bleaching powder)

Use of Vaccines

There are vaccines available against tetanus, typhoid, Hepatitis A and Influenza. They have limited role and usually take 10-14 days to act. These are not routinely advised. You may consult your local doctor regarding these.

A dose of Inj T.T may be advised to those prone to cut injuries but it should ideally be followed up with 2 subsequent doses at 6 weeks and 6 months interval from the first dose and then a booster every 10 years for full protection.

4. Psychological issues

In addition to physical illnesses, post flood anxiety, fear and depression are also common ailments. Psychological support and counselling may be necessary depending on the requirement of the person. We need to exhibit empathy and be sensitive to those who are distressed due to the deluge.

When to refer?

Please access a doctor in case of:

- a. **Fever** - not settling in 3 days, feeling very weak, giddy and unable to take by mouth.
- b. **Diarrhoea**: profuse diarrhoea, blood and mucus in stools, vomiting, unable to take by mouth, feeling very weak, low urine output.
- c. **Cough and fever**: not settling in 3 days, breathing difficulty, yellow sputum

Conclusion

We trust these guidelines will help the church and community leaders to assist people of their communities in basic medical problems faced in the post-flood period. If there are any further clarifications needed, please don't hesitate to contact your nearest qualified doctor or contact the email id given below.

References:

**Post Flood Epidemic Outbreak Control Measures ppt. - Dr. P. Kuganantham,
Former City Health Officer, Chennai**
**Infectious Diseases- An aftermath of Floods, The Hindu-Apollo Hospitals circular,
The Hindu, December 10th, 2015**

http://www.medicinenet.com/typhoid_fever/page3.htm

<http://www.cdc.gov/leptospirosis/symptoms/>

<http://www.healthdirect.gov.au/worms-in-humans>

<http://www.ncbi.nlm.nih.gov/books/NBK11786/>

<http://www.cdc.gov/meningococcal/about/symptoms.html>

Prepared by:

**Dr Manoj C Jacob, MD (Med.), Gen. Secretary,
Evangelical Medical Fellowship of India, Chennai.**

**In consultation with Dr Anand Zachariah, Professor and Head, Medicine Unit 1,
Christian Medical College, Vellore.**

Any further queries may kindly be addressed to Dr Manoj Jacob- emfihq@gmail.com