



The Commonwealth of Massachusetts
Executive Office of Health and Human Services
Department of Public Health
William A. Hinton State Laboratory Institute
305 South Street, Jamaica Plain, MA 02130

DEVAL L. PATRICK
GOVERNOR

TIMOTHY P. MURRAY
LIEUTENANT GOVERNOR

JUDYANN BIGBY, MD
SECRETARY

JOHN AUERBACH
COMMISSIONER



Building a Healthy Boston

Clinical Advisory

TO: Massachusetts Health Care Providers

FROM: Alfred DeMaria, Jr., MD
State Epidemiologist
Massachusetts Department of Public Health

Anita Barry, MD, MPH
Director
Infectious Disease Bureau
Boston Public Health Commission (BPHC)

Larry Madoff, MD
Deputy State Epidemiologist
Massachusetts Department of Public Health

DATE: May 2010

RE: Waterborne Illness following Exposure to Drinking Water

This advisory addresses the management of patients who might present with symptoms or findings possibly related to consumption of contaminated water resulting from the disruption of the MWRA water supply.

The recent boil water order was pre-emptive and precautionary, and not a response to water testing suggestive of fecal contamination. Therefore, the risk for infection related to recent events affecting the MWRA water supply is very low. Nonetheless, clinicians should be alert for patients presenting with gastrointestinal illness and should query such patients about drinking water in the affected communities. The infections that would be of particular concern under these circumstances are the parasitic infections, giardiasis and cryptosporidiosis.

Patients who present with a history of exposure (i.e., drinking untreated water), but without symptoms, may be offered reassurance of the extremely low likelihood of acquiring waterborne illness. They can be instructed to contact their clinician if symptoms develop.

Patients who present with gastrointestinal illness (nausea, vomiting, diarrhea, weight loss, abdominal cramps, dehydration, with or without fever) should be managed as in normal circumstances except for a heightened awareness of the possibility of waterborne pathogens:

- Careful attention should be paid to state of hydration and ability to maintain adequate fluid and electrolyte intake, especially in infants, the elderly, pregnant women, and those with underlying chronic medical conditions
- Oral and intravenous rehydration should be given as needed
- Stool specimens (per institutional protocol) may be sent for bacterial culture and for detection of parasites. The laboratory should be alerted to the possibility of *Cryptosporidium* and *Giardia*
- Careful attention should be given to immunocompromised individuals
- Individuals with suspected infectious gastrointestinal illness should be counseled to avoid spreading the infection to others. Advice should include careful attention to personal hygiene and handwashing, avoidance of swimming, and avoiding sexual practices that might result in oral exposure to stool
- Empiric antimicrobial treatment is not normally warranted and may be hazardous

Cryptosporidiosis

[BPHC fact sheet](#)

[MDPH fact sheet](#)

- Caused by the coccidian parasite *Cryptosporidium parvum*
- Incubation period 2 to 10 days (average 7 days)
- In normal hosts, symptoms persist for 1-2 weeks (sometimes with spontaneous remissions and exacerbations)
- Nitazoxamide has been FDA-approved for the treatment of cryptosporidiosis in people without underlying immunocompromise, however most people recover spontaneously
- Immunocompromised patients, especially those with advanced HIV disease (low CD4), are more susceptible to cryptosporidiosis and may present with prolonged and unremitting watery diarrhea

Giardiasis

[BPHC fact sheet](#)

[MDPH fact sheet](#)

- Caused by the parasite *Giardia lamblia* or *Giardia duodenalis*
- Incubation period 1-2 weeks (average 7 days)
- Symptoms may persist for several weeks and may include (in addition to symptoms mentioned above) greasy stools that tend to float, and gas or flatulence
- Treatment includes nitazoximide and metronidazole

For additional fact sheets, including fact sheets in other languages, go to www.bphc.org and mass.gov/dph.