

When Water Goes Bad

A look at four cases of water contamination

Background Intel

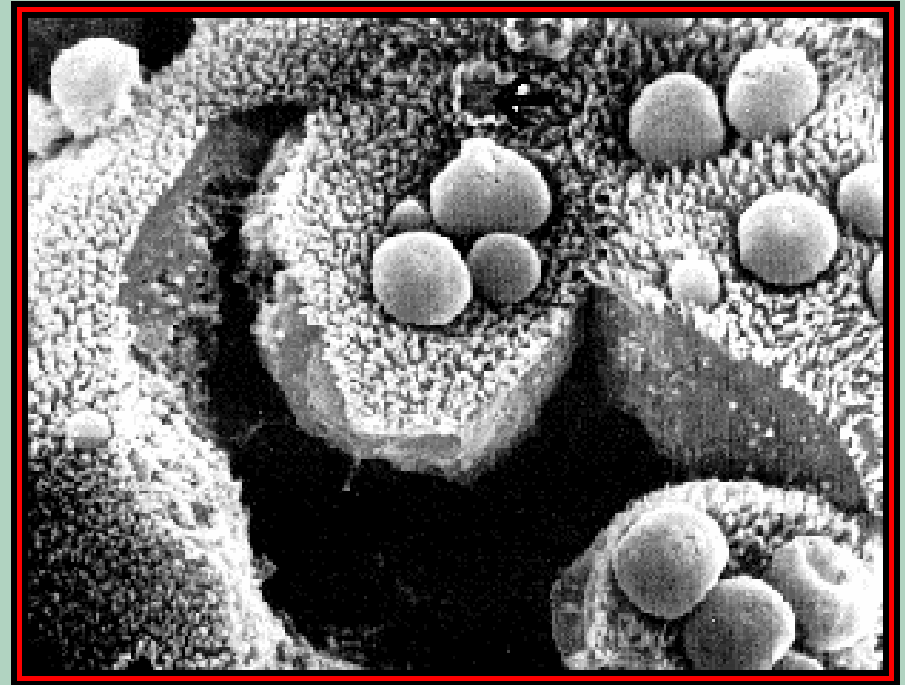
- There are many disease that are caused by waterborne pathogens, including *Campylobacter*, *Cryptosporidium*, *E. coli*, Hepatitis A, and *Shigella*.
- Most of these diseases have very similar symptoms.
- Some countries, especially in Africa and India, have outbreaks all the time.
- Let's look at 4 cases from Canada and the US.

Milwaukee, WI

- March 23 to April 8 1993
- *Cryptosporidium* outbreak
- Over the two week period 403,000 people of the 880,000 people served by the water plant became ill.
- Over 100 deaths occurred, mostly in elderly and immunocompromised people.
- Cause was sewage that passed through the filtration system of one of the drinking water plants serving the city.
- The plant was shut down.

North Battleford, SK

- March 20 to April 25, 2001
- *Cryptosporidium* outbreak
- Over 7,000 people became ill as a result of the outbreak but there were no deaths associated with it.
- A lack of settling in the Solids Contact Unit in the surface treatment plant was the cause of the outbreak.



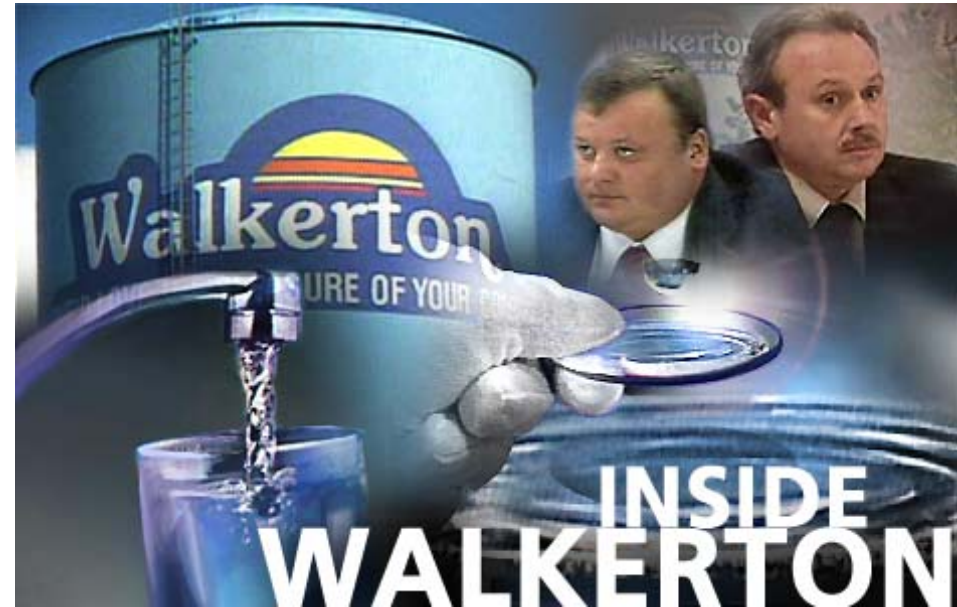
New Orleans, LA

- August 29, 2005 to present
- *E. coli*, cholera, fecal coliforms.
- There is no documented number of people infected, but there were at least 5 deaths reported as a result of waterborne disease.
- The cause of the contamination was the flooding of the city.
- There continues to be increased risks of contamination.



Walkerton, ON

- May 9 to 24, 2000
- *E. coli* contamination.
- Over 2,300 people became ill and 7 people died.
- Contamination occurred from manure runoff into Well 5. The water from this well was not properly chlorinated.
- An inquiry was conducted that found the Koebel brothers guilty of not treating the drinking water. Stan Koebel was sentenced to 1 year in jail. Frank Koebel received 9 months under house arrest.





Other Diseases

- There are many more diseases that are either water-related or waterborne.
- The WHO estimates that 80% of all diseases can be linked to water.
- Unfortunately, most of these diseases can only be identified AFTER an outbreak has occurred.
- Do you think it would cost more to test and treat the water OR to treat the sick people?



Time to Talk

- Could any of these outbreaks have been prevented?
- Should one person be held responsible if water treatment fails?
- If you were infected with a waterborne illness, what would you do?
- What can we do to prevent future outbreaks?