

August 2015

## Cryptosporidium in water supplies: Guidelines for renal units



Following the reports on 8<sup>th</sup> August 2015 regarding traces of cryptosporidium in water produced from the Franklaw water treatment works outside Preston, the Association of Renal Technologists (ART) has considered if this might affect water treatment systems used for producing water for dialysis.

Cryptosporidium is a protozoan parasite, single-celled organism. Cryptosporidium can infect humans, cattle and other animals, and can cause diarrhoea in humans. There are two main species of cryptosporidium that cause infection in humans, *Cryptosporidium hominis* (*C. hominis*) and *Cryptosporidium parvum* (*C. parvum*). Cryptosporidium is passed on in the stools of infected humans and animals. It can then be found in soil, water, food, or on surfaces that have been contaminated with the infected faeces. It has a tough outer shell which protects it and provides resistance to chlorine, less so to chlorine dioxide, UV and Ozone.

Human-to-human transmission of infection is possible if poor hand hygiene is observed. People may also become infected if they drink contaminated water. The largest outbreaks of cryptosporidiosis have occurred when drinking water becomes contaminated with sewage or manure. Adequate filtration of water is needed to remove the parasite. Outbreaks have also occurred through swimming pool contamination, as chlorination does not always kill the parasite.

### Action to be taken by renal units

- Observe stringent handling precautions when dealing with used filters or when sampling water that has not been treated by RO.
- Good hand hygiene must be observed at all times before and after handling used filters or when sampling water that has not been treated by RO
- Stick rigidly to manufacturers recommendations regarding disinfection of RO systems as a minimum.
- Caution must be taken when handling RO reject water, and in cases where it is not discharged into a sealed drain or where the reject water is recycled.
- The parasite may remain active in the water supply for some weeks so any precautions regarding handling of exhausted pre-filtration or samples should remain in place; take advice from your water supplier on this.
- Reverse Osmosis (RO) treatment will remove this parasite from the water supply, so there is minimal risk to dialysis patients.
- The parasite is within the range of 2 - 6 micron in size; if required a 1micron absolute filter will remove the parasite from the water supply.

**Please submit comments, solutions, and personal experience to:**

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