Environmental Contamination with Protozoan Parasite Infective Stages: Biology and Risk Assessment

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Abstract
In the present paper some aspects of the biology and various factors influencing the potential for environmental contamination with protozoan parasites infective stages implicated in water and foodborne diseases are described. The major protozoan species that affect humans are *Entamoeba histolytica*, *Acanthamoeba* sp., *Neagleria* sp., *Giardia intestinalis*, *Cryptosporidium parvum*, *Cyclospora cayetanemis*, *Toxoplasma gondii*, *Isospora/Sarcocystis* sp., *Encephalitozoon* intestinals and *Enterocytozoon bieneusi*. These parasites exist in the environment as oocyst, cysts or spores, which are the transmissive stages in many environmental conditions, e.g. water, soil, food as well as being infective stages to subsequent generation of hosts. Global concern with parasitic contamination of our environment must influence development of better detection methods and of evaluation and risk assessment of these infections. In this paper, the biology, waterborne and foodborne transmission, as well as methods for detection and control of *Cryptosporidium parvum*, *Giardia intestinalis* and *Toxoplasma gondii* will be described.

Key words: protozan parasites, water and foodborne transmission, detection and control