



Bromine, chlorine, fluorine and iodine belong to a family of elements known as halogens. Halogens share similar properties like disinfection and bleaching. They are popular chemical disinfectants for the control of water borne pathogens.

Outdoor surface water in rivers and lakes almost always contains microorganisms regardless of how clean it appears. Hence, campers and outdoor enthusiasts should boil water prior to consumption. If boiling is not an option, Health Canada recommends the use of chlorine and iodine disinfectants.

Iodine is a halogen element used for water disinfection. Although it can protect against exposure to *Giardia*, it may not be effective against more resistance microorganisms like *Cryptosporidium* (both parasites cause gastrointestinal illnesses).

Iodine may be added as liquid or tablet to disinfect filtered or settled water in cases of emergency. In fact, iodine tablets were used to disinfect water for emergency use during World War II.

Common household iodine from the first aid kit is acceptable for water disinfection. According to Health Canada, six drops of liquid iodine (tincture of iodine) or one tablet is sufficient to disinfect one litre of water. Once added, the water should settle for 30 minutes before consumption to ensure maximum disinfection. Iodine works well in warm water. Hence it is desirable to warm up cold water prior to disinfection with iodine.

It is important to note that iodine is toxic and must be kept out of reach of children. Pregnant women are particularly sensitive to iodine and it should be avoided.

Iodine may be used for water disinfection at camps if boiling is not an option. Use 6 drops of iodine for every litre of untreated water.

