



INFORMATION ON WATER CHLORINATION

Fact Sheet

Chlorine is added to drinking water during the water treatment process to limit microorganisms like bacteria and viruses found in the water sources that can make us sick.

BENEFITS

- ❖ Chlorine prevents life-threatening diseases like cholera and typhoid fever
- ❖ Chlorine is the most commonly used drinking water disinfectant
- ❖ Chlorine is the disinfectant with the most scientific information

RISKS

Chlorine reacts with organic matter present in water like decaying leaves. This reaction produces by-products, most the common being trihalomethanes (THMs).

THE LEVELS OF THESE BY-PRODUCTS IN OUR WATER DEPEND ON:

- ❖ **SEASON**
 - Generally lower in the winter than summer because less chlorine is needed at colder temperatures.
- ❖ **SOURCE OF WATER**
 - Lower when wells or large lakes are the sources.
 - Higher when rivers and surface waters are the source because they usually have more organic matter.

There have been animal and human studies showing that long-term exposure to high levels of chlorination by-products like THMs may increase the risk of cancer and may also have an effect on pregnancy miscarriages. These studies do not prove that there is a link between THMs and cancer or miscarriage but they show that more research needs to be done to confirm potential health effects.

OVERALL

Benefits of chlorinating our drinking water (less disease) are much greater than any health risks from THMs and other by-products.

Although other disinfectants are available, chlorine remains the choice of water treatment experts.

PREVENTION

You cannot remove all disinfection by-products, but here are some steps you can take.

- ❖ Activated carbon filters can be used to remove chlorine and its by-products (follow the manufacturer's instructions).
- ❖ Health Canada recommends the use of chlorine products that are certified to health-based standards. The Standards Council of Canada can provide information on the certification process.

References

[Health Canada- Drinking Water Chlorination](#)

Call us Toll-Free at
1-866-960-5223 for more environmental
health resources.

Prepared by: Guylaine Charbonneau, M.Sc.,
P.Dt