

# Chlorine in Your Water

You most likely are, at one time or another, aware of the chlorine used to disinfect your municipal water. Although its distinctive aroma may be unpleasant to some, it is an indication that your water supply is being adequately treated to protect you from harmful or deadly microorganisms.

Chlorine effectively kills a large variety of microbial waterborne pathogens, including those that can cause typhoid fever, dysentery, cholera and Legionnaires' disease. Chlorine is widely credited with virtually eliminating outbreaks of waterborne disease in the United States and other developed countries. Chlorine is currently employed by over 98 percent of all US water utilities that disinfect drinking water. It has proved to be a powerful barrier in restricting pathogens from reaching your faucet and making you ill. Chlorine and chlorine-based compounds are the only disinfectants that can efficiently kill microorganisms during the flow of water from our wells to your tap.

If chlorine kills so many species of microorganisms, why doesn't it harm humans? Fortunately, when we ingest chlorinated drinking water, food in our stomachs and the materials normally present in the intestinal tract quickly neutralize the chlorine. So chlorine concentrations along cell membranes in the gastrointestinal tract are too low to cause injury.

The PCMA carefully regulates chlorine levels so that they effectively kill disease-causing microorganisms but do not harm people. In addition, the PCMA tests the concentration of chlorine in your drinking water at various check points throughout the development every day to assure that chlorine levels are acceptable as per DEP regulations.

For chlorine to be effective against microorganisms, it must be present in a sufficient quantity, and it must have a sufficient amount of time to react. This reaction time is called the contact time. For most water systems, the best contact time is usually 30 minutes. To ensure continued protection against harmful organisms, a certain amount of chlorine must remain in the water after treatment. The remaining chlorine is known as a residual chlorine. It is this tiny amount that you sometimes smell in your tap water.