



## Disinfection of Water

In NSW disinfection is achieved by using either Sodium Hypochlorite (the liquid) or Calcium Hypochlorite (a whitish powder or solid pellet). Even Gas Chlorine is still in use in country or rural areas.

Both involve exactly the same chemistry and produce the same result.

When either of the hypochlorites is mixed with water a chemical reaction occurs which results in the formation of hypochlorous acid (HOCl).

Hypochlorous acid carries out the disinfection and is measured as 'free chlorine'.

Free chlorine destroys bacteria and other pathogens by oxidising or burning the cell wall.

It reacts vigorously with anything organic and once it has reacted it is used up.

Disinfection is a continuous process requiring continuous supply of chlorine.

The solutions of chlorine are usually added directly into filtered water after the filtering.

This allows optimum mixing in the pool.

***Chlorine disinfection is affected by pH.***

***As pH raises the effectiveness of chlorine decreases***

The ideal pH for operating a swimming pool is in the range 7.5 to 7.8.

At pH over 8.0, chlorine has less than half the disinfecting power it has at pH 7.5.

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