

Fact Sheet: **Caring for your fish**

Western Water uses a process called chloramination to disinfect drinking water*. While this treatment is completely safe for people, chloramines are harmful to fish and must be removed from tap water *before* it is used in aquariums or fish ponds. The following information will assist you to neutralise chloramines in the water supply and protect your fish.

What is chloramination?

Chloramination involves the addition of very small amounts of chlorine and ammonia (called chloramines) to the water supply, to destroy any disease-causing bacteria that may develop in the water. Chloramines are valued for their residual effect in disinfecting drinking water, as they prevent bacteria from growing in the pipe distribution system.

How do chloramines affect fish?

Although the chloramination process is safe for humans, chlorine and ammonia are toxic to fish. When chloramines enter a fish's bloodstream (directly through its gills), they bind to the fish's red blood cells, reducing their capacity to carry oxygen. Fish become lethargic and can die.

Removal of chloramines

There are two primary methods of neutralising chloramines in water: conditioning agents or activated carbon.

Water conditioning agents

Chloramines can easily be removed from water with the aid of a water conditioning agent. Your local aquarium shop should stock a range of these products, which usually contain sodium thiosulphate and other substances to "age" the water before use in an aquarium or pond.

Water conditioning agents break the chemical bond between the chlorine and ammonia. There are products available that specifically remove both chlorine and ammonia from tap water. However, it is important to carefully select which agent to purchase, as some conditioning agents will only neutralise the chlorine thereby causing ammonia to be released into the water. Your local aquarium shop can supply more information on the different agents available.

Activated carbon

Passing tap water through high-quality granular activated carbon can help remove chloramines, however its effectiveness depends on the size and type of carbon filter used, as well as the operating conditions such as flow rate, contact time and pH levels. This process will also release ammonia into the water, which should be removed before you add it to an aquarium or pond.

Please remember that it is important to carefully follow the manufacturer's directions to avoid harming your fish, regardless of the product you choose.

Test kits

It is recommended to test for complete removal of chlorine from any water that is to be used in an aquarium or fish pond. Your aquarium shop can advise on test kits.

Controlling ammonia

As mentioned above, some ammonia will remain in the water after removing chloramines with a dechlorinating agent or activated carbon. A number of methods are available to control the level of ammonia in the water.

pH control

Keeping the pH of the water in your aquarium or pond at 7.5 or below will reduce the toxic effect of ammonia. Careful monitoring is necessary, and your aquarium shop can provide pH test kits and correction chemicals.

However, please note that this method may not be suitable for certain species of aquarium fish, especially marine fish, which require a high pH.

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* Chloraminated water is supplied to all towns except Lancefield and Myrning. In some smaller outlying areas we also use the traditional chlorination method to disinfect drinking water.

Nitrifying bacteria

Established aquariums and pond systems contain nitrifying bacteria, which grows on solid surfaces such as gravel and sand material. The bacteria will break down any ammonia present in the water.

It does take time for the bacteria to grow, so this method is not suitable for new aquariums and ponds. In fact, nitrifying bacteria can take up to six weeks to develop, before it can effectively limit ammonia levels.

Ammonia removal resins

Placing resin materials inside filters in the aquarium or fish pond can reduce ammonia levels. Materials can widely differ in their effectiveness, so it is important to seek professional advice on an ammonia removal resin product that meets your fish needs.

Important points to remember

- Dechlorinate tap water before adding it to a fishpond and/or aquarium. DECHLOR is a suitable product and can be purchased from leading aquarium suppliers.
- To minimise the risk of harming your fish, consider making smaller and more frequent water changes.
- Carefully follow the manufacturers directions on any product you use to neutralise chloramines.

Further Information

Please seek professional advice from your local aquarium shop on the most suitable products for your fish.

For general advice, please contact Western Water on 1300 650 425 or visit our website at www.westernwater.com.au