

How to protect your fish

Sydney Water supplies drinking water that is tested and treated to meet the high standards set by NSW Health and the National Health and Medical Research Council (NHMRC) in the drinking water guidelines.

The guidelines set out requirements for both public health and the appearance of water. Tap water must pass both the health requirements and turbidity, colour, taste and odour tests. However, some of the treatments that make water safe for people may make it harmful for your fish.

Treatment

There are six simple treatments in the conditioning of tap water to protect your fish:

1. Dechlorination/chloramination
2. pH adjustment
3. Flushing the household system
4. Aeration
5. Water ageing
6. Filtration.

1. Dechlorination

Sydney Water adds chlorine to the water supply to remove bacteria and other micro-organisms that are harmful to people. In some longer pipelines we also add ammonia to ensure the disinfection of the water right up to your tap.

The gills and other exposed areas of fish allow the easy absorption of chemicals, so it is important to remove chlorine before adding it to aquariums and ponds.

Test kits are available from swimming pool shops and aquarium shops that indicate the presence of chlorine in water.

To dechlorinate water you can:

- Age the water by standing it in sunlight for two days.
- Use granular activated carbon filters. These are sold in most aquarium shops.
- Use a commercial water conditioner. These are sold in most

aquarium shops.

2. pH adjustment

The pH balance is a measure of the acidity or alkalinity of your water. It is advisable to maintain the pH level of the water in your pond or aquarium at around 7 (neutral). Tap water can be outside this range, especially where the water passes through new cement-lined pipes.

You can correct your pH balance using chemicals from aquarium shops. Test kits are also available from swimming pool shops, but the chemicals used in swimming pools may be unsuitable for fish.

3. Flushing

Copper and zinc from household pipes may cause kidney, liver and gill damage in fish. These metals are most likely to come from new pipes or pipes in the upper floors of tall buildings. Hot water from services with copper tanks can also endanger the health of fish.

Flushing your household system will remove these traces and can occur in the course of normal household activities like using a washing machine. If you live in a tall building it is advisable to get water for your aquarium from a ground floor tap.

4. Aeration

A low oxygen level can lead to stress in fish. Dissolved oxygen levels of 5mg/L and above should help maintain a healthy aquatic environment.

Aeration maintains the appropriate oxygen level for fish. An aerator will supplement aquatic plants that produce oxygen only during daylight hours.

5. Water ageing

It is always a good idea to set up your tank without fish for a couple of weeks to allow time for essential bacterial colonies to develop and to help equalize the temperature of tap water to that of the surrounding environment.

Thermal shock is another threat to fish. Generally, the higher the temperature, the greater the risk to your fish. It is a good idea to equalize the temperature of the colder tap water with that of your aquarium or pond before using it.

6. Filtration

Dirty water can clog the gills of fish and obstruct breathing. It may also reduce the amount of light entering the pond or aquarium and prevent aquatic plants from producing enough oxygen.

Filtration, using a good aquarium or pool filter, will help solve many dirty water problems and ensure your fish remain healthy. It is wise to pass aged, aerated, dechlorinated or pH-adjusted water through the filter being using it to fill your aquarium.

The addition of granular activated carbon (see dechlorinated tips) to the filter will help remove chlorine, chloramines and other impurities that may be there.