

## **Victoria Mary Hollifield, DVM**

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### **Fish: Fresh & Marine**

Water quality is essential for healthy fish. Poor water quality is stressful resulting in an animal that is susceptible to infections. Checking water quality is always the first step when a fish is sick.

**Optimum Temp:** Fresh 70-75 F, Marine 77 F

**Light Dark Cycle:** 12-12 hours, cold fluorescent bulb

**pH:** below 7.0 is acidic, 7.0 is neutral, above 7.0 is basic/alkaline

**Fresh water pH:** 6.8-7.3, with 7.0 ideal, Marine pH 8-8.5 with 8.4 ideal

**Crowding:** surface area determines the number of fish that can safely live together. Fresh water: 1" fish per gallon of water, Marine: 1" fish per 3 gallons of water.

**Biological Cycle:** Fish are fed, food and waste products break down into ammonia, bacteria break the ammonia into nitrates and then nitrates, algae use these up and release oxygen. The cycle starts over. Ammonia and nitrates are toxic, but high nitrates are the most toxic to fish.

**Water quality** problems need an immediate 30% to 50% water change. This can be repeated daily until the tank is balanced again. Water replacement must match the temperature, pH and salinity if marine, of the original tank water. Increased aeration for 24 hours will also help to balance the water problems. Always dechlorinate first!

**Symptoms of bacterial diseases** include pop-eye, cloudy eye, open sores, abscesses, rotting skin, dropsy, rapid breathing, swim bladder disease, ulcers, fin or tail rot. Less obvious are red rim edges or lines in the tail and fins. Broad spectrum or gram negative spectrum antibiotics are most affective, examples include nitrofurazone, aureomycin, neomycin sulfate, kanamycin, tetracycline, oxytetracycline, nitrofurazone, nalidixic acid, and metronidazole. Ultraviolet light helps to prevent the spread of disease. Dips can also be useful, saline is used for fresh water fish, and fresh for marine fish in case there are parasites as well.

It is best to treat in a separate hospital tank. If this is not possible, follow instructions as the carbon filtration may need to be temporarily discontinued. Scaleless fish such as catfish, sharks and rays are more sensitive and need a lower dose or a totally different medication. Always seek additional advice from your aquatic veterinarian and your local reputable fish dealer when your tank has a bacterial or parasite problem.