

## WATER TESTING & OTHER COMMON ILLNESSES

Testing aquarium water on a regular basis is always a good idea. Prevention of poor water conditions is far easier to fix than the treatment of fish disease it can cause.

The three primary substances to test for are ammonia, nitrite, and pH level. These are the primary cause of stress in fish (especially during the first 3 months) which can lead to illness and even death.

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### AMMONIA

Symptoms: fish gasping for air, listless at the bottom of the tank, or have stress related illness such as ich or fungus. Can also cause bad smelling water (do a 25% water change and change the carbon in your filter).

Prevention: regular testing and partial water changes, not overfeeding.

Ammonia toxicity is relative to pH of the water, at about a pH of 7.2 or lower ammonia's toxicity is very minimal and not usually any concern to fish. When testing for ammonia it is important to test the pH at the same time.

If ammonia level is 2.4 or higher, the pH is 7.3 or higher, and fish are gasping for air then do a 25% water change, add ammonia remover to filter, and a double dose of Paradise Express (or Nutrafin Cycle, Paradise Bio Booster – Paradise Express is preferred, it is live bacteria as opposed to dormant so it will work much faster).

If ammonia level is 2.4 or higher but the pH is 7.2 or lower doing a water change can actually make things worse. You would be removing some ammonia but replace the water with city water which generally has a higher pH. This would make the pH in the tank go up and make the ammonia more toxic. In this case we would recommend doing a double dose of Paradise Express, Paradise Bio Booster, or Nutrafin Cycle to decrease the ammonia in the tank.

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### NITRITE

Symptoms: fish gasping for air, listless at the bottom of the tank, erratic movements, or have stress related illness such as ich or fungus. Can also cause bad smelling water (do a 25% water change and change the carbon in your filter).

If nitrite level is 1.6 or higher and fish are gasping for air then do a 25% water change plus a double dose of Paradise Express (or Nutrafin Cycle, Paradise Bio Booster – Paradise Express is preferred, it is live bacteria as opposed to dormant so it will work much faster).

For more information call 780-459-6896 or come visit us!

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## PH

Symptoms: stress related illness such as ich or fungus, darting movement, inflamed and bleeding gills, rapid gill movement, hanging around the water surface gasping for air.

1. If the pH is 7.8 or higher use pH Down twice a day and re-test every 3 days (test the water 2-3 hours after adding pH down). It will generally take about 2 weeks to see results. Adding bog wood or drift wood will also help soften the water and lower the pH level.
2. If the pH is 6.6 or lower perform a KH test (very rare).

\*Note: Edmonton city water pH is generally about 8.0, most fish will do fine at this pH level. The only time that you would have to treat a pH at this level is if your fish have ich or fungus and ammonia/nitrite aren't the problem.\*

## OTHER COMMON SUBSTANCES THAT CAN CAUSE PROBLEMS

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### KH (CARBONATE HARDNESS)

KH in an aquarium acts as a pH buffer, this means that it will stabilize the pH level. Low levels of KH are generally associated with a low pH, without a good level of KH in an aquarium the pH tends to bounce around leaning towards lower pH (6.6 or lower) which can be harmful to fish.

If you test the pH and it is 6.6 or lower and the KH test is also low, then doing a partial water change will increase both the pH and KH (city water has KH in it to keep it stable).

If you test the pH and it is where you want it (this will vary depending on fish species) but you have a low KH, adding KH booster will help raise the KH but keep the pH stable.

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### IRON

There are 2 types of iron that can be in water, chelated and free. Chelated iron is a usable form that plants use (recommended amount is 0.25ppm). Free iron is toxic to both fish and plants and is the one that causes rust. City water has very little free iron.

Symptoms: plants will have poor color, yellow spots, poor stem growth, and leaves falling off.

If the iron tests at 0.5 or higher do a 25% water change.

\*Note: Some well water can be very high in free iron and toxic to fish. If you notice reddish/brown rust stains in your bathtub, sink, toilet bowl, etc. do not use this water for an

aquarium, use city water or a 50/50 mix of city water and bottled water. Even if well water is passed through a softener it is still toxic to fish\*

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#### NITRATE/PHOSPHATE

Not toxic to fish but it can weaken their immune system if it is in high concentration; this can lead to other illnesses.

Symptoms: high algae growth, yellow colored water.

Do a 25% water change and add nitrate and/or phosphate remover to your filter. The addition of live plants will also help reduce these substances as they use them as food.

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#### GH (GENERAL HARDNESS)

If you would like to use well water (after iron levels have been tested as OK) for your aquarium or if you are not doing water changes but just topping up evaporated water, and notice your fish are not doing so good but have no sign of illness (ammonia, nitrite, and pH also tested OK).

A good range for GH is 100-200 (60-100 for things like neons, cardinals). If the GH is higher you can use a water softener pillow or distilled water. Adding bog wood or driftwood will also help soften the water.

\*Note: a water softening pillow is different to a water softening system you might have in your house. The water softening systems in some houses that pass the water through salt crystals is not recommended to use for aquariums since this introduces substances to the water which can be toxic to fish.\*

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#### CHLORINE/CHLORAMINE POISONING

- St.Albert uses Chloramine which **must** be chemically treated.

Symptoms: appearing very stressed, covered in mucus, pale, gasping, cloudy eyes.

Prevention: treat water before fish are introduced.

Treatment: remove fish and place in treated water, however this type of poisoning is almost always deadly and causes permanent gill damage to any survivors.

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## HYDROGEN SULFIDE POISONING

Symptoms: rotten egg smell, fish gasping for air.

Prevention: removing any dead fish or dead plant matter. Increase surface agitation and replace carbon in filter.

Treatment: do a water change with a siphon to remove debris from gravel.

## ILLNESSES, PREVENTION, AND TREATMENT

When using any medication remove the carbon from the filter, if left in it will neutralize the medication. Put new carbon in after the treatment is done. If there is any sign of stress do a dose of dechlorinator and/or Paradise Express, a vitamin pyramid is also recommended.

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## LACK OF OXYGEN

Symptoms: rapid gill movement, hanging around the water surface gasping for air, lack of color.

Prevention: proper aeration, regular water changes, adding live plants (adding too many live plants will cause a lack of oxygen, they use CO<sub>2</sub> in the day and oxygen at night)

Treatment: partial water change, removal of any dead fish/plants. Surface agitation.

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## VELVET DISEASE

Symptoms: fish covered in a gold to grey film, gasping for air, rubbing against rocks.

Treatment: raise the water temperature to 82°F, use methylene blue, maracide, Nox-Ich, parasite tabs (pre-dissolved), or general cure. Add aquarium salt & dechlorinator.



## ICH

Symptoms: small white spots

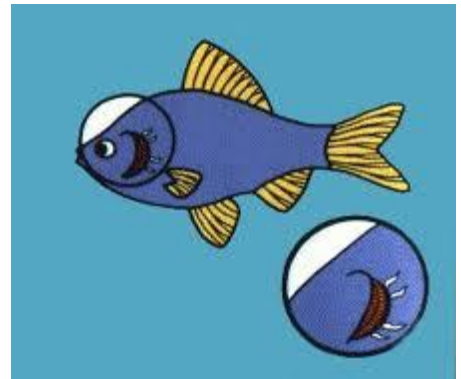
Treatment: addition of aquarium salt and raise temperature to 82°F. Use nox-ich, maracide, methylene blue, parasite tabs (pre-dissolved) or super ich cure.



## GILL FLUKES

Symptoms: redness and slimy gills, panting at the surface, rapid breathing.

Treatment: use general cure, prazil pro, or parasite clear until all eggs and flukes are gone. Add aquarium salt and increase temperature to 82°F.



## HOLE-IN-HEAD DISEASE

Symptoms: loss of weight and pitting in head region.

Prevention: keeping tank clean, especially gravel.

Treatment: use general cure or parasite clear.



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## SAPROLEGNIA AND ACHLYA

Symptoms: cotton like tufts of fungus on the fish's body.

Treatment: raise the temperature to 82°F, add fungus cure, maroxy, fungus cure, methylene blue, or pimafix. Add aquarium salt.



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## FIN ROT

Symptoms: discolored and frayed fins.

Treatment: use fungus cure, tetracycline, fungus clear, or melafix. Add aquarium salt and increase temperature to 82°F. An antibacterial fish food will help regenerate fins.



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## DROPSY

Not a disease in itself but caused by other underlying diseases, it is not always possible to determine the cause.

Symptoms: swollen or hollow abdomen, loss of buoyancy control, raising of the scales away from the body (also called pinecone disease).

Treatment: if caught early add small amounts of Epsom salt (2.5 teaspoons per 10 Gallons), if the fish is still eating feed an antibacterial fish food. Use of maracyn will also help. If not caught early there is not a very good chance of survival.

