

What's That Smoke in My Aquarium?

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One day while patiently waiting for your aquarium to cycle, you notice the water doesn't look very clear. Upon closer inspection, it actually looks like white smoke is swirling around in your aquarium!

What Should You Do?

Panic is a common reaction, causing some people to change all their [filter media](#) and do a water change in fear that some kind of poison has been distributed through the aquarium. Unless your fish are in respiratory distress, there is no need for this action. In fact, it can be detrimental to the health of your aquarium. To determine the best course of action, it is best to understand just what is happening and why.

What is it?

Most likely, high levels of ammonia have recently been experienced by this tiny eco-system. This causes nitrifying bacteria that consume ammonia to reproduce so quickly, they over populate to the point that they are visible, creating what looks like clouds of swirling, white smoke.

Is it Dangerous?

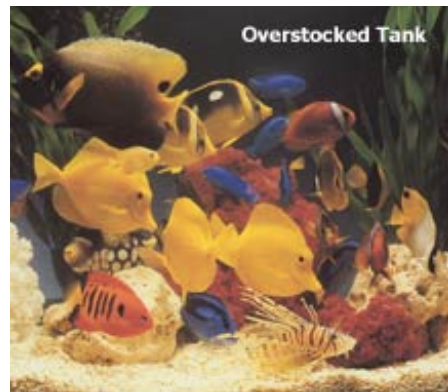
High ammonia levels can burn gills and other tissue on fish, making it difficult for fish to take in oxygen from the water. Ammonia poisoning turns the gills a lilac color. High nitrite causes the fish's blood to be less efficient at carrying oxygen. Nitrite poisoning is very toxic and can cause sudden death while fish appear quite full of color. If the fish are breathing hard, or hanging out at the surface or filter output, they are most likely in respiratory distress.

What Causes This to Happen?

Most of the time it happens when a high bio load has been added to an eco-system with inadequate [nitrifying bacteria](#), such as adding too many fish to a brand new aquarium. Over-cleaning with chlorinated water, as well as treating with strong [antibiotics](#), are other possibilities.

What to do

1. Hook up an [airstone](#) with an [airpump](#). Air bubbles help release toxic gasses from the water, allowing it to hold more oxygen.
2. [Test, test, test](#). Test for ammonia and nitrite immediately to form the best plan of action. In the beginning, the ammonia level will be high and will continue to rise or stay at a high level, and nitrite could be zero or starting to rise. As time passes, the nitrite levels will continue to rise. Suddenly, one day (usually within a week), the ammonia level will drop to zero. When this happens, nitrite-consuming bacteria will begin to reproduce. They then turn the toxic nitrite into less toxic nitrate, thus completing the cycle. Testing should continue daily until zero levels are achieved. pH and gH levels will only require daily testing if you intend to change the pH level.
3. [Changing pH](#): Lowering pH can help make ammonia less toxic. Test pH and general hardness before attempting to make any changes. In freshwater, a pH of 7 or below turns ammonia into a less toxic form. If your water is hard, you will need to soften the water before adjusting pH. Then lower pH slowly. In saltwater, pH can be lowered to 8, but if the inhabitants are not the hardiest of marine creatures, a water change is less risky.
4. [Water changes](#): If fish are showing signs of respiratory distress, you may want to do a small water change. Keep in mind that when doing a water change at this point, you will also be throwing away nitrifying bacteria, extending cycle time. So if your fish don't look stressed, don't do it.
5. Make sure you have adequate [biological filtration](#).
6. Take time to observe your fish every day until the cycle is completed. Treating the aquarium with [bacterial additives](#) can help speed up the process.



What NOT to do

Unless your fish are under visible stress, it is best to let nature take its course. The bacteria will settle down and the water will clear itself. Do not add [chemical media](#); however, if these are already in the filter, leave them alone, as they may already house nitrifying bacteria.



