

Fish Tank Cycling

When a tank is brand new it needs to go through a "cycling process". There's some science behind it all but I'm going to try to explain it as easy to understand as possible and not go into the science of it all.

When you first set your tank up it's kind of like a new born baby. It has no immune system essentially, No good or bad bacteria. We want and need enough good bacteria to break down the toxins in the water that your fish are going to be making. Without this good bacteria the toxin levels will raise so high that no fish could survive. There are few ways to go about getting this good bacteria.

Traditionally, cycling was done by adding a few hardy fish, such as danios or feeder fish, to a new aquarium. These fish provided the ammonia that bacteria required to survive. But until the filter is mature, these fish are exposed to high levels of ammonia and nitrite. This is the cheapest way. When going this route a good rule of thumb is to use 1 small goldfish for every ten gallons of water. (I.E. a fifty-five gallon tank, I'd recommend about five small goldfish.) If one dies just bury it in the gravel. We use goldfish because they have a higher tolerance to ammonia because they put off a lot of ammonia. We want them to start producing waste so the good bacteria can start to colonize and it can't colonize and grow without having bad bacteria to feed on.

Nowadays, there are many products available to speed the process up. Good bacteria in a bottle, such as Fritz 7 for freshwater, Fritz 9 for saltwater, API's Quick start, Dr. Tim's One and Only, and Tetra's Safestart just to name a few. Even after your tank has been cycled; I still use these products everytime I add fish to help combat the ammonia spike that happens everytime fish are added to your tank.

Another honorable mention to speed this process is using filters or decorations from an already established tank. So if you already have a tank in your home that's been cycled you can use the decorations or gravel or filter from that. Good bacteria exists and colonizes on surface areas within your tank and in your filter and not in the water itself, so there is absolutely no benefit in using water from an already established tank. If it is your first tank and don't have one setup already, maybe you've got a friend with a tank. You can get an old filter cartridge or even buy your filter early while you're saving money for your tank and put that filter on a friends established tank so it can start to get good bacteria which will almost instantly cycle a tank when you put it in your new tank.

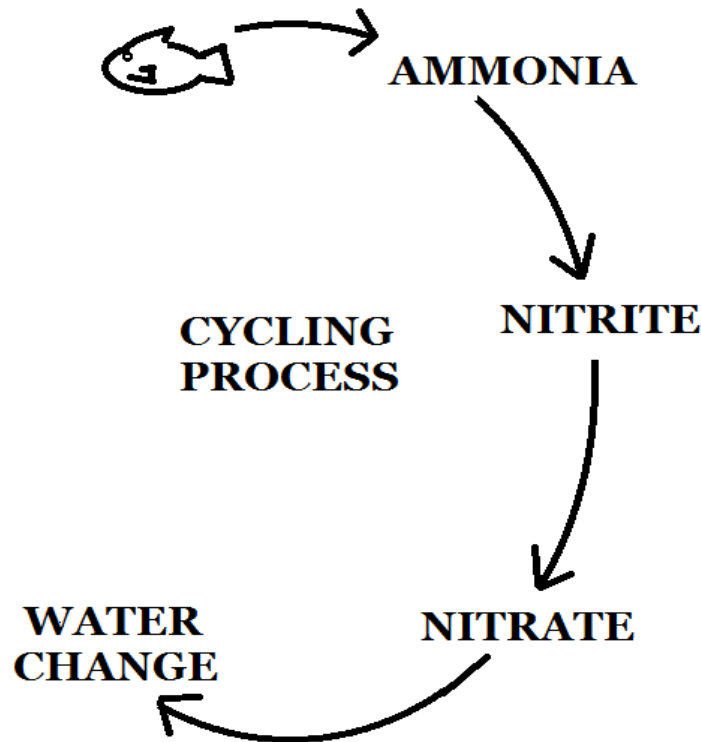
The way we tell if a tank is cycled is by testing the water. There is no test for good bacteria but by testing the water we can watch it go through this cycle process so we know when you're ready for real fish. The cycling process consists of three stages, the first stage is ammonia, the second stage is nitrite, and the third is nitrate. Each stage is less toxic with ammonia being most toxic to nitrate being the least toxic.

Every tank is going to be different; In my experience the smaller the tank the longer this cycling process takes, But regardless every tank is going to be different.

The first day your test results should show zeros across the board because you have neither good nor bad bacteria present as of yet. As the days pass you will see a spike in ammonia but still zeros in nitrite and nitrate. Next your

ammonia level will start to drop and as that level starts to drop the nitrite will start to rise. This is what we want to see but we're still not done yet. As more time passes you should see your ammonia levels either back to zero or very little and you should see your nitrites going down as the nitrate starts to rise. When you're Ammonia and nitrites are back or close to zero and you have nitrates then we know now your tank has cycled. But we still aren't done. How do we get rid of Nitrates? WATER CHANGES. Water changes are very important to keep nitrates at bay. I recommend at least bi-weekly water changes depending on the size and the number of fish your keeping. Obviously, the more fish you have the more they poo, and the more water changes are necessary. Live plants can also help keep nitrate levels down but that's not always an option depending on the fish you keep. Some fish tend to eat live plants or will uproot them. Water changes are also important because it can be very difficult to get your levels back down if they get out of control and can even result in losing fish and, maybe even the entire tank of fish. Water changes also promote overall fish health and growth.

Here's a visual of the cycling process.



I hope this helped you better understand the the cycling process that new tanks go through.

-Your Friends @ Brothers Pets