

Automate Basic Aquarium Functions

Drs. Foster & Smith Educational Staff

You have pampered your fish and plants, and now it's time for an extended business trip, or an opportunity to pamper yourself with a well-deserved vacation. But what about your aquarium? How can you leave for three days or longer and be sure your aquatic life will be fine when you return? Relax. With the right equipment, and a little help from a friend, things can go smoothly.

Anticipate situations

What could go wrong while you are away? Here are the top five vacation emergencies you should plan for:

1. **Overfeeding** - The person watching your fish may mean well but will often over-feed your fish, even when forewarned. Large amounts of uneaten food can quickly foul and lower aquarium water quality.
2. **Power outages** - If an electrical power failure occurs while you are gone, your equipment stops working. Without a functioning filter to maintain water movement that replenishes vital oxygen levels, oxygen will quickly deplete, possibly to dangerously low levels. And depending on the season, water temperature could easily climb, or drop, out of the fish-safe range.
3. **Heater failure** - No piece of equipment lasts forever. Aquarium heaters sometimes crack and fail.
4. **Stress** - Deviating from any maintenance routine can quickly cause stress in your fish. For example, light needs to be provided on schedule to maintain natural behavior.
5. **Sick or dead fish** - A fish in your aquarium that looked perfectly healthy the day of your departure, for example, could expire and start a deadly chain reaction among all of your fish.

Make sure all five of these potential emergencies are covered

We recommend that you take advantage of the advancements in automated equipment to reduce the amount of manual daily maintenance. Instead of replacing your care, these tools will help you fine-tune your efforts. They will also free you to take time off, and simplify demands on your helper. While there are many excellent devices for automating aquarium functions - dosers, water-fills, alarms, and so on - here are the basics we believe you should have, whether or not you are on vacation.

1. **Auto-Feeder** - Battery-powered [automatic feeders](#) deliver

food reliably, work right through power failures, and won't overfeed like a well-meaning, but inexperienced helper. Because they deliver pre-calibrated amounts, and in the most natural of ways, many aquarists prefer to use them all the time. If you intend to make occasional use of an auto-feeder, we recommend that you test it at least two weeks in advance of your trip, for three or more days. This will accustom your fish to the feeder, and assure you that it is operating properly.

2. **Battery-operated air pump** - The first priority during a power outage will be maintaining oxygen levels in your aquarium. Several styles of [battery-operated pumps](#) are available. For vacation back-up, select a unit which switches on automatically when there is a power outage. To ensure reliable operation, always insert fresh batteries in this and all your devices before your trip, and have extra batteries on-hand for your helper.
3. **Heater** - You know the importance of maintaining uniform water temperature. Unfortunately, heaters sometimes break, often when you least expect it. We recommend having a [back-up heater](#) on hand before you leave. Ideally, it should be pre-set to your aquarium's current temperature.
4. **Light Timer** - Because the health of your fish and plants depends upon the quality and duration of the light, we recommend that your aquarium lights be regulated by an [automatic timer](#). When selecting a timer be sure that it is rated to meet the demands of your particular light fixture. A timer-operated light fixture minimizes stress on the life in your aquarium by ensuring a more natural day and night light cycle..
5. **Isolation** - Create a safe haven for sick or injured fish by installing a convalescent home, internal refugium, or an aquarium divider before your trip. Your helper will have a place to move fish if he or she spots a problem.

Stick to your routine

Stress can often take its toll on the immune system of aquarium fish, making them more susceptible to disease. To ensure your fish stay healthy when you're away, minimize their stress levels by keeping feeding, lighting, and all other activities on schedule.

Make sure any necessary maintenance is done well before you leave. Don't wait until the last minute to test the water, clean filters, or do a water change. It is not a good idea to add new fish, plants or structures just prior to departure, or anything else that would increase the bio-load or alter the water chemistry. If anything in your aquarium reacts adversely to these changes, you will not be around to correct them.

Arrange for back-up

As an aquarist, you understand the nitrogen cycle and practice a number of techniques to maintain water quality and equipment. This is a lot to expect from a helper, unless, they too, share your hobby.

The primary role of the helper should be to check that your automated equipment is functioning properly, and to inspect the aquarium for signs of sick or dead fish, removing them immediately. This person will also need to install and engage the back-up equipment should the need arise. Thus, the more your helper knows about aquarium equipment set up, the better.

Ask your helper to check on your aquarium daily, even if you have everything on auto-pilot. If there is any kind of failure, and your friend is an experienced aquarist, he or she can diagnose and correct it. If not, be sure to leave your contact number with your helper, and also the number of a local fish store or professional consultant.

With proper planning, the right equipment, and assistance from a conscientious helper, you will be able to enjoy your time off, and return home to a healthy aquarium and thriving fish.