

# How to Raise Brine Shrimp



Because of the variety of new and specialized fish food products, fish owners rarely think about raising food for their pets, but it is quite easy to do. Although you should have some experience with an aquarium system as well as a certain level of creative innovation for such an undertaking, raising live food such as brine shrimp can be rewarding.

Brine shrimp are a popular species to culture at home because it is relatively easy to keep a population of them – especially if you know a little about how they live. This zooplankton is also called Artemia, and like shrimp, crabs and lobster, are a kind of crustacean.

Following these basic guidelines and combining them with your experience, you can maintain a healthy stock of brine shrimp. Once you've put together your [culturing system](#) that works, you can just kick back and watch yet another of nature's scenes unfold as your fish chase after and gobble up their home grown prey.

## Getting Started

Setup your culture bottle, either suspend the bottle or set it up in a frame. Fill the bottle with saltwater to 1.030 add the eggs and let sit for a few minutes for the shells to absorb the water then aerate vigorously in 18 -24hrs the eggs should be hatched and others ready to hatch. Stop the air and let settle, cover the container in a dark material. Leave enough space at the base for a bright light to attract the brine from the surface to the bottom, after 10min or so all the hatched brine will be at the base, open the valve and siphon them out leave the empty shells will float to the surface. Use a sieve to catch the brine babies rinse them in freshwater and feed them to your fry or fish. You can put the extra baby brine in another bottle or container with the same mix of salt water and unhatched eggs will hatch in the new container. You can feed them live algae freshwater [MicroMagic](#), concentrated [algae paste](#), Spirulina powder and some people even use yeast.

### Further Detailed Information:

#### Circulation and Aeration

Setting up a circulation system can be tricky. To grow healthy adult brine shrimp, strong aeration and good water circulation are essential. You will need to come up with a way to ensure your pump is continually circulating through all regions of the tank. If you use air stones, use only those that make large bubbles because brine shrimp will ingest small air bubbles (or they lodge in their swim-appendages), which forces them to the surface where they will eventually die.

#### Lighting, Temperature and Water Quality

Brine shrimp are attracted to light so use a low light level; otherwise they will expend much of their energy (which lowers their quality) in an effort to remain near the light source. A 60- to 100-watt light will suffice but hatching will require higher light levels (2000 lux constant illumination). Optimal temperature conditions range from about 25 to 30c, depending on the strain that is cultured. They prefer salinity between 30-35 ppt and a pH of around 8.

## Maintenance

To keep water quality adequate, change about 20 percent of the water each week and clean the bottom of the tank every few days. To do this, turn off the air and let the tank settle. Shine a flashlight at the surface and wait a moment as the artemia are drawn to it. Siphon off the material on the bottom, consisting mainly of moulted shells.

## Lifecycle

Start out by purchasing a packet of dehydrated [brine shrimp cysts](#) from Aquatic Live Food. These cysts can stay viable for many years, providing they are kept dry and unexposed to the air – a container in the refrigerator keeps them well. The cysts contain dormant embryos that will resume their development once they have been placed in water.

After 15 to 20 hours in water that is about 25c the cysts burst and the embryo leaves the shell. In this “umbrella” stage, the embryo hangs beneath the cyst shell, still enclosed in a membrane.

Once it separates from its shell, it becomes a free-swimming young shrimp called a nauplii. It is brownish in colour from the yolk it carries to complete its development. After about 12 hours, these nauplii moult and begin to feed normally, filtering tiny particles such as microalgae and bacteria, out of the water.

It takes about eight days and 15 moults for nauplii to reach adulthood. In low salinity and good food conditions, females will produce 10 to 11 broods of a few hundred free-swimming nauplii over about 50 days. Adult brine shrimp get to be about 8 mm long, but in the right environment can reach 20 millimetres.

Throughout their lifecycle, brine shrimp change in quality, a big consideration for the aquarist. Newly hatched shrimp are rich in fat (about 23 percent dry weight), which is used up as they develop (dropping to about 7 percent as pre-adults). Adult brine, however, are high in protein: about 63 percent compared to 45 percent for the nauplii. So, if you have young fish, which require a high-fat diet for growth, you need to harvest nauplii. But if your tank has many older juveniles and adults, which require a high-protein diet for health and reproduction, adult brine shrimp are better.

## Harvesting Your Brine Shrimp

To harvest the nauplii, turn off the air and let the stock settle for about 10 minutes. Hatched empty shells will float to the surface; unhatched cysts will sink to the bottom. The nauplii will also concentrate on the bottom. Since they are attracted to light, use a flashlight to herd them to where you can scoop them out with a paper cup. Harvesting the adults can be done in much the same way, and the larger adults can be caught in mesh nets. Unhatched cysts can be collected and used for another batch or saved in case something goes wrong and you need to start over.

## Feeding

Brine shrimp are filter-feeders and consume particles in the water column as well as inert nutrients. Freshwater [MicroMagic](#), concentrated [algae paste](#), Spirulina powder and some people even use yeast. Do not overload the tank with inert foods; it leads to fouling and low oxygen levels. Continuous drip-feeding is best. Small amounts several times a day also works.