



# Intro to Freshwater Turtle Care

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Freshwater turtles can be a joy to own! You may remember the plastic turtle "pools" with a tiny island in the middle sold in the 1960s–1970s. These setups were far too small for pet turtles. Turtles require large tanks with a powerful filtration system, heat and ultraviolet lamps, water heaters, and a basking spot. A healthy habitat is necessary to maintain these turtles in captivity.

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## Habitat

Freshwater turtles can grow up to 15 inches in diameter and need at least a 75-gallon tank. The more turtles you have, the larger the tank you will need. If you have more than 2 turtles, you should consider a 100-gallon tank. The tank should be filled to approximately 1/3 with water. Provide one or more logs, rocks, turtle "docks" or other sources of dry land for your turtle to climb upon and dry out. A turtle that cannot dry out completely is susceptible to shell rot.

Be sure to purchase a powerful filter. Turtles produce great quantities of waste products that must be filtered from the water. Use a filter designed for a tank larger than the one you have. For example, if you have a 100-gallon tank, purchase a filter made for a 200-gallon aquarium (even if your 100-gallon tank only has 33 gallons of water in it).

You need a canister-type filter such as those made by Eheim, Fluval, or Rena Filstar. Under-gravel filters designed for fish tanks are not appropriate. The canister filters are designed to accept several filter modules, allowing for different filtration methods in one filter. The primary method of filtration should be "biological". This method uses a substrate in the filter module that harbors a colony of bacteria.



The bacteria break down the waste products of your turtles naturally, transforming them into less harmful substances. Be sure to change the media in your filter on a regular basis. Even with one of these powerful filters, you will need to do weekly water changes to keep the tank clean.

## Heat & Lighting

Turtles are reptiles, and reptiles cannot maintain their internal body temperature. The only recourse they have for cooling or warming themselves is to move to a cooler or warmer spot in their environment. To recreate the natural temperature gradient your turtle species is adapted to, you will need to purchase a heat lamp and a water heater for your turtle's habitat.

Create an air temperature gradient in your turtle's habitat. Place a heat lamp over one of your turtle's basking spots and measure the temperature at "turtle height" under the lamp. The warmest spot should be approximately 90 degrees F. There should be another basking spot at the opposite end of the tank without a heat lamp. This will provide your turtle with locations in her habitat that are at different temperatures, allowing her to regulate temperature easily by moving from one spot to another.

Monitor the temperature in your turtle's habitat with several thermometers and be sure to check them at least once a day. You will want a thermometer in the water, one at "turtle height" by the heated basking spot, and one by the basking spot without heat.

Use submersible water heaters in your tank to maintain the temperature between 75 and 85 degrees F. Purchase a plastic guard for your heater so that your turtles' shells do not break the heater's glass housing. It is a good idea to have an extra water heater on hand in case the one in the tank breaks or stops working. Cold water will predispose your turtle to sickness.

Try to provide lighting that mimics the light cycle in your turtle's natural environment. Most often, 10-12 hours of light per day is optimal. Never leave a white light on for 24 hours. Plugging your light into a timer is the best way to ensure regular light cycles.

All turtles need ultraviolet light (UVA and UVB) in order to synthesize the vitamin D they need. Be sure your bulb produces UVB in addition to UVA. Many bulbs only produce UVA which is inadequate. Without enough UVB light, a turtle will lose bone density, predisposing her/him to fractures.

Most UV bulbs stop producing ultraviolet light long before they burn out. Most bulbs stop emitting UV light after 6 months of use. Date and replace your ultraviolet bulbs at least every 6 months.

## Diet

Young freshwater turtles are more carnivorous than adults. They need a higher percentage of meat protein (reptile sticks, feeder fish, worms, etc.) in their diet. As they mature, they will choose to eat more vegetables and less meat. Feed hatchling and juvenile turtles every day. Feed adults every 2-3 days.

Reptile sticks are available at local pet stores. There are several brands/manufacturers (ex. Mazuri, Zoo Med, Wardley, Tetra). No one brand is best at this point. Until we know more about nutritional requirements for turtles, we recommend buying small amounts of two or three brands and mixing them. This will help balance the nutrients, vitamins, and minerals and prevent your turtle from becoming dependent on one brand of food.

Provide fresh greens daily, such as romaine, red and green leaf lettuce, butter lettuce, mustard greens, watercress, escarole, collards, kale, dandelion greens, and Swiss chard. It is important to vary the greens you give each day. Do not feed one type exclusively. You can also offer small amounts of chopped or shredded vegetables such as carrots, squash, sweet potato, green beans, bell peppers, cucumber, cauliflower, or broccoli. Again, offer variety.

Feeder fish are a great way to provide balance to your turtle's diet. Live prey has several advantages. Food doesn't get any fresher than live prey! The fish will survive well in the tank/enclosure until your turtles are ready for a snack. Live prey is also balanced in nutrients, particularly calcium. Be sure the fish you offer is an appropriate size for your turtles.

Some turtles enjoy earthworms. Be sure to purchase these at a pet supply store rather than pull them from your backyard.

## Salmonella

Any reptile may be carrying salmonella, even when they are perfectly healthy. Many reptiles are persistently infected. This means that they harbor the bacteria in their body at all times, and shed the bacteria into the environment when stressed. The most common sources of stress are inappropriate habitats and poor diet.

It is safest to assume that your reptile is always shedding salmonella. Always wash your hands after handling. It is especially important to supervise small children. Children and immunocompromised individuals are at most risk for serious illness from salmonella infection.

## Other Illness

Observe your turtle's appearance and behavior closely to learn what is normal for them. Unusual behavior or changes in normal habits can be a sign of disease. Watch for non-specific signs of disease such as reluctance to eat, listlessness, weight loss, or abnormal/runny stool. If you notice any of the above, please call us.

Metabolic bone disease (MBD) - This condition has more than one cause. Turtles that do not get enough UVB light or have little calcium in their diet are predisposed. When MBD is advanced, the turtle's bones break easily and the result can be many painful fractures.

Shell rot - A turtle's shell is primarily composed of bone. Turtles wear most of their skeleton on the outside! Shell rot occurs when the bone becomes infected and can be a very serious problem. Freshwater turtles need to haul themselves out of the water occasionally and completely dry off to prevent shell rot. If you ever notice a portion of your turtle's shell becoming soft, call us right away for an appointment.

Hypovitaminosis A - Your turtle will not have this problem if you supplement her/his diet with a multivitamin and mineral powder. There are many available at your local pet store. Sprinkle your turtle's food once or twice a week. Feed plenty of romaine lettuce. This leafy green is high in vitamin A. If your turtle's eyes appear swollen, She/he may need a vitamin A injection. Please call us if you notice swollen or shut eyes in your turtle.

Respiratory infections - Unfortunately respiratory infections, including pneumonia, are common in turtles. Watch for these signs: bubbly nose, tilted body while swimming or floating, open-mouth breathing, or bubbly mucus at mouth edges. Call us right away if you notice any of the above. The sooner we can diagnose and treat a respiratory infection, the better our chances of success.

## Preventive Care

We recommend a yearly checkup for your turtle. Signs of disease can be subtle and if we can catch a problem sooner rather than later, we will have a better chance of successful treatment. At your pet's annual exam, we will check her eyes, ears, nose, beak, mouth, shell, limbs, cloacae, and general body condition including weight and shell appearance. We will also discuss with you any new information we have regarding turtle care. Each year there are advancements in the preventive health of these "exotic" animals!