

Lighting for Turtles & Tortoises: Why UV is Key

Drs. Foster & Smith Educational Staff

In the wild, turtles and tortoises are exposed to ultraviolet light (UV) every day. Absolutely essential to their health and growth, UV plays a key role in the production of Vitamin D3, which is necessary in the absorption and metabolism of [calcium](#), as well as other essential vitamins and minerals. Vitamin D3 deficiency can result in limited shell growth, metabolic bone disease, and often, a premature death. Supplying appropriate [UV lighting](#) in your pet's habitat is one of the many important responsibilities you carry as the owner of a turtle or tortoise.

To understand UV light more clearly, and the problems you may encounter when trying to supply it to your pet, you must first know that there are two main types: UVA and UVB. Your pet needs both, but he particularly needs UVB, the short wavelengths of light, for Vitamin D3 production. Exposure to UVA is also important for the activity level, feeding, and breeding in many species.

Each species of turtle/tortoise may have different Vitamin D requirements. The need for Vitamin D depends upon whether the turtle/tortoise is a land or water species, whether he is an herbivore (eats plants) or carnivore (eats meat), and upon his geographical origin (temperate or tropical). Depending upon the age of the animal, his species, and his diet, a combination of UVB light, calcium supplementation, and [Vitamin D supplements](#) may be needed. Research the needs of your particular pet to determine what will be best.

When using UVB light, there are several important things to remember:

- First, UVB cannot penetrate through glass, and it can even be partially blocked with fine mesh. Do not place a glass top over the cage between the bulb and the animal. If a mesh top is necessary to prevent escapes, select a type with larger openings. (Note: Quality UVB bulbs are specially made, so UVB can pass through their glass.)
- Second, UVB light from a bulb rapidly loses its intensity the farther away it is placed from your pet. UVB bulbs should generally be placed 12-15 inches above the animal, and no more than 18 inches.
- Next, when shopping for a [UV bulb](#), it is important to consider the amount of UVB it produces. Research the UVB needs of your species before buying a bulb. Most species do well with a bulb that emits 3-5% UVB, left on for 10-12 hours per day.
- Finally, UVB bulbs don't last forever. After several months of use, they start to decrease in output. Plan on replacing your bulb about every 10 months, more often for some brands. Keep in mind that this is one of the ongoing costs of keeping a turtle or tortoise.