

Egg-Bound Turtle

What can you do for an egg-bound turtle?

By Margaret A. Wissman, DVM, DABVP

Q. I have a rescued eastern box turtle. She was being kept in a tank of water with a rock to sit on. I felt eggs in her the day I got her. It has now been over two weeks. At what point should I worry that she may be egg-bound?

She isn't eating much, but is very active and shows no signs of straining or digging a nest. She weighs 1.65 kg and measures 6½ inches (straight carapace length). In order to keep her separated from my established box turtle colony, she is being kept in a large plastic container. It is filled 10 inches deep with a mixture of potting soil and sand. (My other turtles have successfully laid their eggs in this mix). There is a temperature gradient of 72 to 88 degrees Fahrenheit during the day, and an evening temp of 70 to 72 degrees at night. The nesting mix is covered in a thin layer of cypress mulch. The bedding is misted once daily to maintain humidity.

Food and water are offered twice a day. She drinks readily, but has only eaten once since I got her. The foods being offered are: Reptical box turtle pellets (moistened with water), earthworms, mealworms, crickets, salad mix including red leaf and romaine lettuce (no iceberg), tomatoes, yellow squash, strawberries and bananas. So far the only food she has taken was a few crickets. These were dusted with calcium supplement.

Two radiographs (X-rays) have been taken, 10 days apart. Both show four fully developed eggs positioned normally. There are no signs of rupture, mineralization, or blockage. Skeletal structures all appear normal.

I am a student in a veterinary technician program. Unfortunately my instructors have no experience with reptiles. They are willing to assist me in any treatments you suggest. I apologize for the length of this e-mail, but I wanted to provide you with as much information as possible.

Thank you
Jaime

A. Wow! Now that is a thorough explanation of the problem at hand. Readers, if you can provide me with as detailed a history and information about the diet, temperature and humidity ranges and any supplements given, that really does help me to help you and your herps!

As for your poor rescued box turtle, our biggest problem is that we just don't know how long she has been gravid (carrying those eggs). Most gravid females will go off their feed once they have fully developed eggs in the shell gland, as there usually isn't much room left to fill a stomach with food. When I start to worry is when the female starts dropping significant amounts of weight. And since we don't know what her starting weight was when she developed the eggs, we can't accurately determine if her weight loss to date is such that we need to start becoming concerned.

The radiographs are beneficial, but unless the films show that the eggs are abnormally shaped, are too large or have thickened shells, the radiographs cannot help us in determining if the eggs are overdue to be laid. Other signs, such as a swollen cloaca, straining, or depression and lethargy, may also be helpful in determining if the female is in trouble. Unfortunately if she is not showing any signs of distress or weight loss, we have a dilemma.

Is your new box turtle egg-bound? Probably. Is she suffering from dystocia? I don't think so. Dystocia is the next step beyond egg-binding and usually involves systemic organ dysfunction, usually beginning with dehydration.

It is wonderful that you have rescued her and have provided her with the appropriate setup to entice her to begin the oviposition process (egg-laying). However, everything is new to her now, and this may be the reason why she hasn't yet begun pacing and digging. Or it may be that the eggs have been in there for a while, too long actually, and she is beyond the normal physiological impetus that starts the whole egg-laying process.

At this point, you are at a crossroads. Initiating treatment on a normally gravid female is unnecessary and may jeopardize her health and that of her future reproductive capabilities. On the other hand, delaying treatment may result in complications that can permanently damage her reproductive tract and even result in her death.

What should you do now? I think you should have blood drawn to run a CBC and chemistry profile. That will give us a

better idea about what is going on regarding her organ systems and how they are functioning. Since you told me that the vets you are training with aren't experienced with herp medicine, ask them to consider utilizing the free consulting service that is offered by the larger veterinary diagnostic labs, and have them call in to speak with an experienced herp veterinarian. I perform avian and exotic consultations for one such lab.

It may be necessary for your box turtle to undergo several injections, with calcium, vitamins and a hormone (often given repeatedly in increasing increments) to bring on the onset of oviposition. Sometimes, fluid therapy is also indicated. I cannot offer specific medical therapy through this column, as my mission for writing this is to provide general information and in-depth medical and husbandry data for my readers. I would be remiss if I gave specific medical advice for a patient that I have not seen or examined.

There are other options for your box turtle. It may be possible to have the eggs imploded (using a needle and syringe to aspirate the contents of one or more eggs to reduce the volume of the eggs in her coelom). The needle is inserted through the skin in the inguinal (groin) area, since it would be near impossible for a needle to be inserted through the plastron or carapace normally. On occasion, this may actually initiate oviposition. Over time retained eggs often become adhered to the shell gland wall, which means that it can prove impossible for the eggs to be passed normally.

If medical therapy fails to initiate normal oviposition, it may be necessary for the female to undergo a c-section. This is often more difficult to perform than in other species of herp, as the plastron shell makes surgery into the coelom (body cavity) a real challenge, involving a special type of saw and wires to suture the excised piece of shell back into place. However, your little box turtle isn't a candidate for this procedure at this time. Usually surgery is performed after medical treatment has not resulted in oviposition.

For now, I would suggest that you start soaking your box turtle in clear sports drink, so that she will be drinking fluids with electrolytes, vitamins and carbohydrates, instead of plain water. This will provide her with some nutritional support until you get this situation sorted out. At this time, keep her in the area where she can pace and dig, which may actually result in her laying her eggs on her own. Wouldn't that be nice?

I hope that your teachers will consider utilizing the consultation service offered by the veterinary diagnostic lab that they use so that your vets can speak with an experienced herp vet who can offer advice on what medical therapy should be attempted. Your turtle doesn't appear to be in any immediate danger, but it is necessary to get her medical problems diagnosed so that appropriate treatment can be instituted.

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